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Proliferation Issues

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PROLIFERATION ISSUES

JPRS-TND-92-005

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3 March 1992

[This report contains foreign media information on issues related to worldwide proliferation and transfer activities in nuclear, chemical, and biological weapons, including delivery systems and the transfer of weapons-relevant technologies.]

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SOUTH AFRICA

Regime, Armscor, U.S. Discuss Arms Sales

*MB1502110092 Johannesburg SATURDAY STAR
in English 15 Feb 92 pp 1-2*

[Article by Peter Fabricius and Martin Challenor: "US Tells SA [South Africa]: Stop Selling Weapons"]

[Text] Cape Town—The United States put diplomatic pressure on South Africa this week to stop its international arms sales and to scale down its missile-manufacturing capacity.

The message was conveyed at talks between US ambassador William Swing, accompanied by officials from Washington, and Pretoria's ambassador to the US Harry Schwarz, Department of Foreign Affairs director-general Neil van Heerden and officials from Armscor [Armaments Corporation of South Africa].

The South African delegation apparently gave the Americans mixed signals.

Faced with having to retrench 5,000 employees within two months, Armscor and hawks in the South African ranks were reluctant to abide by the American request and wanted Pretoria and Washington to agree to disagree.

However, Foreign Affairs officials, mindful of the need for South Africa to win respect in the international community, were keen to scale down Armscor scales and abide by American wishes. This group made it clear that Pretoria had acceded to the non-proliferation treaty it signed last year, and had submitted to an inspection of its arms sales network.

Armscor described leaks from the talks as speculation and declined to comment further.

American government sources in Pretoria said yesterday that the US had held discussions with governments around the world on arms proliferation.

America has openly accused Armscor of breaking the Missile Technology Control Regime that the US and six other countries created in 1987 to restrict the proliferation of missiles and related technology.

This restricts transfer of missiles and missile-related technology capable of delivering at least a 500 kg payload to a target 300 km away.

It is understood that the talks focused on America giving advice to the South Africa Government on how to wind down its siege arms industry in order to gain entry into the club of respectable arms dealers.

US and South African government sources both dismissed press speculation that Washington was trying to curb Armscor's weapons production in case a future African National Congress [ANC] government adopted a hostile stance towards the US.

Although America is concerned about the ANC's links with Libya and the Palestine Liberation Organisation, the US spokesman said: "The non-proliferation discussions we have been pursuing have nothing to do with South Africa's internal domestic politics. They are related to our concern to limit around the world the proliferation of lethal technologies."

America does seem a little touchy, however, on what friends a future ANC government may favour.

This week's talks were held in South Africa because SA fears that Armscor officials may not be welcome in America.

Ten Americans, seven South Africans and three South African companies—Armscor, Kentron and the Barlow Rand subsidiary Fuchs Electronics—face charges in a Philadelphia court of running a multibillion-rand arms smuggling ring from 1978 to 1989 to break international arms sanctions.

Foreign Minister Pik Botha said the discussions formed part of continuing consultations held with a number of countries to strengthen international co-operation on non-proliferation.

Mr Schwarz said yesterday that South Africa wanted to "achieve a greater international respectability, and the discussion about arms reduction forms part of that objective".

South Africa was speaking to America on arms reduction because the US had taken the lead on non-proliferation.

"We covered a wide range of arms and weaponry proliferation in our talks," Mr Schwarz said.

"This is part of our desire to re-enter the world of international respectability, particularly in relation to arms control, and to be of good standing in the world community."

SADF Says Chemical Weapons Probe 'Inconclusive'

*MB1502121392 Johannesburg SAPA in English
1117 GMT 15 Feb 92*

[Text] Pretoria Feb 15 SAPA—An investigation by the SA [South African] Defence Force [SADF] into the use of chemical weapons near the South African border in Mozambique was inconclusive—but it was unlikely the weapons were responsible for the deaths of Mozambican soldiers, the SADF said on Saturday. The investigation followed claims that Mozambican soldiers died in January at Macaene, about 10km from the border. The soldiers died after guerrillas from Mozambique's rebel Renamo [Mozambique National Resistance] movement fired rockets at them from the direction of the border. The warhead exploded above the soldiers, it was claimed, releasing a dense cloud of black, poisonous gas.

South Africa agreed to a request from the Mozambican Government to help investigate the claims. According to the SADF statement, a South African team visited, examined and interviewed four victims of the attack between January 22 and January 24 near Macaene. The symptoms of another six patients were reviewed, and post mortems performed on two soldiers who died in the incident.

Because of the instability in the area, the South African team was not able to cross the border to examine the site from which the rocket was launched, nor was it able to pin-point its location from South Africa. Although helicopter flights were restricted to South African air space, it was felt a large number of bodies near the border would be easily seen. Nothing was sighted, however.

The SADF concluded that although there was reason to suspect that an "unusual incident" did in fact occur, there was no evidence of chemical weapons having been used. "The patients described a variety of strange symptoms, but these do not fit the picture of any known

chemical agent. At the time of examination, no patient or corpse showed signs attributable to known chemical exposure. Although chemical exposure cannot be excluded, it can also not be confirmed from the evidence seen."

According to the SADF statement, the evidence of Mozambican soldiers did not support allegations that a vehicle or aircraft had crossed the border from South Africa during the incident. "Three of those interviewed, including a captain who gave the most convincing account of the incident, directly stated that although an aircraft and a vehicle had been seen travelling near the border on the South African side just before the incident occurred, they had most definitely not crossed the border and were not involved in the incident in any way."

The statement said the SADF did not have chemical weapons. "The SADF has, however, studied the subject of chemical and biological warfare to be able to act defensively against such weapons should it ever be necessary."

Spokesman Denies Missile Technology Sale to Iran

*OW1302095492 Beijing XINHUA in English
0943 GMT 13 Feb 92*

[Text] Beijing, February 13 (XINHUA)—A Chinese Foreign Ministry spokesman said here today that the report of China selling intermediate-range ballistic missile technology to Iran is groundless.

He made the remark when asked to comment on AP and AFP reports, which quoted sources of U.S. intelligence services as saying that China is selling to Iran technology needed to produce intermediate-range ballistic missiles.

"That is a totally groundless and fabricated allegation," the spokesman said.

SOUTH KOREA**North Reportedly To Develop Missiles With Libya**

*SK1702075292 Seoul HANGUK ILBO in Korean
17 Feb 92 p 1*

[By correspondent Hwang Pyong-tae from Berlin]

[Text] WELT AM SONNTAG, a German Sunday newspaper, reported on 16 February that North Korea and Libya will build a launch test site to jointly develop a new generation of medium-range missiles with a range of 1,000 km.

Quoting an intelligence agency source in Hamburg, this newspaper reported that, because of geographical

restraints, North Korea cannot test medium-range missiles in the country and that, as a result, it is trying to jointly develop them with Libya, which has offered a test site.

This newspaper noted that North Korea has built an improved generation of Soviet-made Scud missile, whose range has been increased, and exported them for several years now, adding that North Korea is planning to develop the new generation of medium-range missiles based on the same Scud missile.

The intelligence agency, the source which WELT AM SONNTAG quoted, is considered not to be the German Federal Intelligence Agency (BND) but a Western intelligence source. This is because German media clearly note if they carry reports based upon BND sources.

ARGENTINA

Cancelling Iranian Nuclear Exports Denied

OW0402001092 Beijing XINHUA in English
2329 GMT 3 Feb 92

[Text] Buenos Aires, February 3 (XINHUA)—Argentine Foreign Minister Guido di Tella denied here today that his government has cancelled the export of nuclear materials to Iran.

He made the statement in reference to a recent news report that the Argentine Government has cancelled the export at the request of the United States.

Nevertheless, di Tella indicated that "It is our hope that Iran will sign the nuclear safeguards treaty and act on the nuclear question in a way that would permit such an export. Otherwise, the export would be impossible."

Arroyito Heavy Water Plant '98 Percent Complete'

PY1502181692 Buenos Aires TELAM in Spanish
0228 GMT 15 Feb 92

[Text] Buenos Aires, 14 Feb (TELAM) — The National Atomic Energy Commission [CNEA] reported today that [words indistinct] the loading of ammonia (?anhydride) at the heavy water industrial plant, and this implies putting into operation the process [words indistinct] obtaining the product, which has been estimated for the end of this year. The plant is located in Arroyito, Neuquen Province.

According to Engineer Ricardo Galli, manager for heavy water projects, "The plant is 98 percent complete. Only the final touches and the equipment fitting have to be done."

Heavy water, together with natural uranium, is an indispensable element for the functioning of Argentina's nuclear plants. The loading of ammonia, a very important landmark in the schedule of the project, began on 4 February and will continue to the end of the month, according to a CNEA press release.

This chemical plant, the only one of its type in Latin America, is one of two important undertakings currently under construction in the nuclear industry, and its conclusion is closely linked to putting into operation the Atucha II nuclear plant.

The official indicated that it is precisely the startup of the heavy water plant "that is vital to the completion of the loading schedule of Atucha II—which is scheduled for 1995—and, thus, is vital to the return of the water used by the Embalse nuclear plant before the rental contract with Canada expires in 1998."

Enrique Garcia, commercialization manager of the Arroyito plant, has indicated that the plant must not only satisfy the demands of Atucha II, "which ties up

seven years of production," it will also have to satisfy "the demands of the future fourth plant that is currently under study."

But the experts consider that the importance that this plant will have for the country can be measured by something else: The demands for this product on the restricted international market in the medium- and long-term are well known, and thus it can be inferred that there are great possibilities that Argentina could export heavy water to countries currently undertaking the construction of plants that will operate with natural uranium and heavy water.

Practically all the services of the Neuquen Province plant are operational, including the intake [toma], treatment and cooling of water, the low temperature steam generation systems, nitrogen and compressed air, the transforming and distribution of electricity, the natural gas network, the treatment of effluents, the processing control room, and other auxiliary services.

Ricardo Slonimsqui, plant manager, has said that "with the loading of the ammonia in the processing sector all the systems have now become integrated, thus beginning the last phase of putting it into operation. This will lead to industrial production."

Disappearance of Cesium 137 Reported

Radioactive Material

92WP0150A Buenos Aires CLARIN in Spanish
1 Feb 92 p 23

[Report by Laura Di Marco]

[Text] A cylinder containing a bar of cesium 137, a highly radioactive substance, disappeared on Tuesday the 28th from the warehouse of the firm Western Atlas Argentina in Comodoro Rivadavia. The police are looking into the possibility of a robbery but are not ruling out that an employee misplaced it. The National Commission for Atomic Energy (CNEA) reported that people are in no danger if the bar remains inside the cylinder. In 1987 there was cesium contamination in the Brazilian city of Goiania: 300 people were hospitalized, and four died.

A metal cylinder containing a bar of cesium 137, a highly radioactive substance, disappeared on Tuesday the 28th from a maximum-security warehouse that the oil company Western Atlas Argentina in Comodoro Rivadavia had built especially to keep it isolated.

The police and the experts that the CNEA sent from the federal capital are working with two hypotheses: the cylinder was stolen, or a workman left it in an oil well and, fearing dismissal, feigned a robbery by leaving the door to the warehouse open.

The cesium bar is a source of radioactivity that Western Atlas Argentina uses to investigate oil wells and determine their profitability. The CNEA indicated that the bar would be dangerous only if someone tried to remove it from its metal casing.

According to the CNEA, the cylinder poses no risk to the health of the population nor is it a source of environmental contamination.

Disappearance

Western Atlas does well surveys; that is to say, it lowers the cesium cylinder into underground wells to ascertain whether they contain porosities or gas-bearing layers. The cylinder, which weighs 34 kg and measures 15 centimeters in diameter by 18 centimeters high, can explore down to 3,000 meters and is used regularly.

On Tuesday the 28th a workman discovered that the door to the warehouse was open; it is usually padlocked. There were no indications of forced entry into the warehouse, and thus the police have deduced that company personnel were involved.

The report was filed by Armando Alvarez at the third precinct in Comodoro Rivadavia, and concurrently the company requested technical assistance from the CNEA, which yesterday sent four experts to the oil firm. The experts are currently using special, highly sensitive equipment in an attempt to detect radioactivity.

According to police sources, the CNEA experts are using a specially equipped truck and conducting their tests outside houses that are regarded as suspicious. The homes belong to oil-company personnel.

Two Hypotheses

The CNEA grants permits to all firms handling radioactive material. In return, the companies receiving these permits must comply with strict security requirements.

Hence, one of the hypotheses being bandied about is that someone, perhaps a competitor, stole the cylinder to discredit Western Atlas by showing that the firm is not meeting CNEA requirements.

It is highly unlikely that the cylinder was stolen to be sold, the police say, because the substance has very limited use. It is used for well surveys, and the market for it is very limited.

Chubut television is broadcasting photographs and drawings of the cylinder so that people can recognize and help find it. "People here have been alerted, but are not frantic," Comodoro police explained to CLARIN.

Search Continues

92WP0150B Buenos Aires LA PRENSA in Spanish
4 Feb 92 p 8

[Text] The National Commission for Atomic Energy (CNEA) reported yesterday that the radioactive cesium

137 that was taken several days ago from a firm in Comodoro Rivadavia has not yet been found, and thus the search in this Chubut city and surrounding areas has been stepped up.

The CNEA indicated that extremely sensitive equipment is being used to locate the substance, which it can detect up to 300 meters away if it is outside its container.

"So far," reported the CNEA, which has sent in a group of specialists, "the search from vehicles and helicopters has not detected the presence of the source outside its container."

The container in question, which is the property of Western Atlas Argentina, is a 34-kg metal cylinder about 15 centimeters in diameter and 18 centimeters high. "This is a solid casing that prevents radioactivity from being released," said the CNEA.

The CNEA clarified, however, that if the cesium is outside the container, "handling it or being close to it would pose a danger to health."

The cesium 137 source "does not produce changes at a distance," said the CNEA, adding that "when inside the capsule, it cannot cause environmental contamination."

The CNEA also recommended that any information on its whereabouts be conveyed immediately to Western Atlas, the nearest police officials, or the commission.

BRAZIL

Government Seeks Control of Entire Nuclear Cycle

PY2302191892 Sao Paulo O ESTADO DE SAO PAULO in Portuguese 20 Feb 92 p 14

[Excerpt] Brasilia—According to a bill that President Fernando Collor submitted to Congress yesterday, one of the objectives of the National Nuclear Energy Policy (PNEN) is to achieve control of the entire nuclear cycle, preferably with national technology. The bill establishes guidelines for Brazilian nuclear policy, which is coordinated by the Strategic Affairs Secretariat (SAE). It also establishes cooperation mechanisms between the federal government, state governments, the federal district, and municipal districts for controlling the transportation, handling, and use of radioactive substances and products in order to safeguard people's health and the environment.

The bill also advocates the nonproliferation of nuclear weapons and government technological and industrial cooperation with Brazilian private enterprise. The bill states: "Technology that is developed independently or transferred to private enterprises must be protected and controlled so it will not be used to manufacture nuclear weapons."

The bill also proposes that another nuclear policy objective is to achieve control and promote the use of nuclear

technology, particularly in the health, agriculture, industrial, energy, and environment areas. It also upholds "complete safety" in operations in nuclear installations, in installations where radioactive materials are present, and in activities using ionizing radiation sources—such

as ultraviolet light, X rays, and other radioactive sources that have high penetration power and can be absorbed by matter and break atoms or molecules—"for the safety of workers, the people in general, and the environment."
[passage omitted]

EGYPT

Foreign Ministry Official on Soviet Nuclear Experts

PM1202103592 London AL-SHARQ AL-AWSAT in Arabic 8 Feb 92 p 3

[Interview with Dr. Usamah al-Baz, Egyptian Foreign Ministry first undersecretary and director of the Egyptian President's Office for Political Affairs, by Suzi al-Junaydi in Cairo; date not given]

[Excerpt] [Al-Junaydi] Some press reports indicated recently that Libya has actually hired some Soviet nuclear scientists. What is Egypt's position on this, especially as it poses a major, direct threat to the region?

[Al-Baz] Obviously it is a serious thing for any state to be dragged into recruiting and employing Soviet nuclear scientists. It is an action surrounded by dangers, because there is currently international alarm that this might lead to an increase in nuclear activities in dangerous and sensitive regions like the Middle East. There is international monitoring of this question conducted by UN organs and organs in the major states. This is because the transfer of any nuclear scientists, military industries, or weapons of mass destruction would be counter to the aim which the international community is currently seeking to realize; namely, to prevent the spread of nuclear weapons and ensure that all world states, especially Third World states, join the Nuclear Nonproliferation Treaty. As for Israel, my expectations are that it will be exposed to strong international pressure to join that treaty and subject its nuclear installations to inspection. Of course, allowing Israel to recruit Soviet nuclear scientists would cause other states in the region to think about acquiring and importing nuclear weapons so that they would not be exposed to an Israeli nuclear threat, thus propelling the region into the vicious circle of an arms race. To break that vicious circle, Israel must first join the other states of the Nuclear Nonproliferation Treaty and allow international organizations to inspect its nuclear reactor to ascertain that all Israeli nuclear capabilities are for peaceful purposes only. [passage omitted]

'Nuclear Embargo' on Islamic World Discussed

NC1502153292 Cairo AL-AHRAM in Arabic 11 Feb 92 p 8

["Close-Up" column by Salamah Ahmad Salamah: "We and the Nuclear Sale"]

[Excerpt] [passage omitted] If we were to examine closely the clamor that is currently being raised over the nuclear weapons market—and the fears raised by the West about the danger of Soviet nuclear weapons, quantities of nuclear fuel, or advanced nuclear technology leaking out through Soviet nuclear experts offering themselves for sale—we would find that it is a fabrication designed only

to prevent Arab and Islamic states from approaching this field or entering it in any way.

This simply means that there is effectively a nuclear embargo on the Arab and Islamic world, under the pretext that Islamic states—of which the West only likes to specifically mention Libya, Algeria, Iran, and Iraq—will start a nuclear war that will lead to the destruction of the world, should Soviet weapons and scientists fall into their hands. There is, however, a big difference between possessing weapons of mass destruction and being able to use them.

Although Iraq possesses chemical weapons, the Gulf war proved that was no reason to use them.

Israel is exempt from all the measures and restrictions of this strict nuclear embargo. Soviet scientists arrived in Israel long ago and there is no doubt that Israel got into the nuclear sale and benefited from its low prices before any other state.

What does the West want? Why should the Arab and Islamic world submit to these restrictions? The balance of nuclear terror protected the world against a third world war. Without a nuclear balance in the Middle East, Israel will not abandon its superiority and will not agree to make the Middle East an area free of weapons of mass destruction.

INDIA

Solanki Reiterates Stand on Nuclear 'Option'

BK1302130792 Delhi All India Radio Network in English 1230 GMT 13 Feb 92

[Text] The external affairs minister, Mr. Madhavsinh Solanki, has reiterated India's stand on the question of signing the Nuclear Nonproliferation Treaty [NPT]. Addressing the consultative committee of members of parliament of his ministry, he said New Delhi cannot accept an unnatural and perpetual division of the world between nuclear haves and have-nots. In this regard, he referred to the prime minister's appeal to recognize Rajiv Gandhi's plan for a time-bound program of eliminating all nuclear weapons as the only logical framework for tackling the question of horizontal proliferation.

According to official sources, while other issues like the situation in Pakistan-occupied Kashmir were discussed, the major thrust of the meeting was on NPT and related issues. There was a consensus at the meeting on the government's stand on the NPT. Members urged the government to safeguard the country's status as a nuclear weapon technology state where India has an option to build nuclear weapons as long as other countries continue to possess them. There was a brief discussion on the proposed five-power conference to discuss the question of a nuclear weapon free South Asia. It was explained that New Delhi had already conveyed to the promoters of this idea its inability to accept the proposal.

IRAN

Reports of Nuclear Weapons Program Denied

92MI0236A Bonn DIE WELT in German 27 Jan 92 p 5

[Article by Amir Taheri: "Iran Starts New Major Nuclear Project—Military Objectives Denied—Hunt for Experts From CIS [Commonwealth of Independent States]"]

[Text] The mullahs ruling Iran have relaunched the nuclear program that Ayatollah Khomeini put on ice in 1979 and has remained there ever since. It envisages a \$4.2 billion investment, divided among various plants, over a three-year period. The new budget, which takes effect on 21 March, the start of the new Iranian year, already allocates 1.1 billion dollars for this purpose.

The decision to revive the Iranian nuclear program has strengthened concerns in western capitals about Iran's capacity to implement a military nuclear program. According to Western intelligence sources, the mullahs' revolutionary leadership has already sent several "head-hunters" to the republics of the former Soviet Union to recruit nuclear scientists and technicians. In some cases, salaries exceeding \$11,000 are reported to have been offered. These, at any rate, are the figures quoted by London's THE SUNDAY TIMES citing British intelligence sources.

According to sources close to Iranian President Rafsanjani, such reports were unfounded. The same sources stressed that Iran was not pursuing military objectives. "We just want to revive a branch of scientific research that no country that wants to be taken seriously can afford to neglect," said Homayun Vahdati, an Iranian scientist presumed to be in charge of the major project. "We should like to acquire the technical know-how and the industrial facilities required to manufacture nuclear weapons, just in case we need them. This does not mean that we currently want to build them or that we have changed our defense strategy to include a nuclear program."

The doubts about Iran's nuclear intentions were raised by the country's sudden decision to insist on the full implementation of a contract signed with France in 1973, when Iran bought an 11.3 percent share of the French-controlled European uranium-reprocessing plant, Eurodif. The contract entitled shareholders to a share of output.

The French believe that, since no nuclear plant is in operation in Iran, Tehran is procuring and storing enriched uranium for military purposes. Iranian sources continue to deny this, insisting that Iran merely intends to complete the plants already under construction, and that the building of two new nuclear power plants, plans for which were drawn up before the revolution, also forms part of the major project.

The U.S. has recently voiced concern over the possibility that Iran might purchase nuclear material and technology from the republics of the Commonwealth of Independent States. It is even reported that Tehran has already bought quite large amounts of enriched uranium. The International Atomic Energy Agency in Vienna has reported that Iran is in "close contact" with many Soviet scientists. To date, however, these sources are unable to confirm that former Soviet scientists have already been recruited by Tehran.

PAKISTAN

Nuclear Working Agreement With India Advocated

BK1702035892 Islamabad THE NEWS in English
16 Feb 92 p 7

[Editorial: "The Need for a Nuclear Doctrine"]

[Text] New Delhi's refusal to sign the Nuclear Non-Proliferation Treaty (NPT) and retention of its nuclear option is unfortunate but not unexpected. The nuclear issue is one in a series of irritants between Pakistan and India, and New Delhi is feeling particularly vulnerable at this stage, given that pressure is growing on India to resolve the Kashmir question. India has also rejected the five-nation summit, proposed by Pakistan, to discuss a nuclear-free South Asia. The proposed summit envisioned some form of an accord between Pakistan and India on non-proliferation under the aegis of China, the United States and presumably Russia, in place of the former Soviet Union, since the proposal predates the disintegration of the USSR. Pakistan can, at this time, sit around and moan over India's refusal to sign the NPT, complain about New Delhi's attitude in world forums and insist that American aid be discontinued to India under the terms of the Pressler Amendment. Or Islamabad can take a practical approach and work towards limiting the threat of nuclear proliferation in South Asia by acknowledging the extent of its own nuclear programme and then working towards creating a balance in the nuclear equation.

There is an imperative need for India and Pakistan to develop a nuclear doctrine. Until now, both countries have asserted that they have only peaceful nuclear programmes. In this context, the two countries have been unable to develop any kind of rationale or doctrine that could govern the development of individual nuclear programmes. There has been a nebulous form of mutual assured destruction operative over the past twenty years, but if New Delhi is certain that it does not want to discuss a nuclear-free zone, then both countries must announce their programmes and draw up some kind of working doctrine determining nuclear policy.

Once we get past the hurdle of pointing accusing fingers at each other, then we can work towards some kind of arms treaty that would contain numbers of warheads and delivery systems. With both countries denying their

nuclear weapons capability in public, and working on it in private, there is absolutely no mechanism determining the numbers involved or who is in actual control of any weapons that may exist or can be hurriedly assembled. If India refuses to become a signatory of the NPT, then Pakistan is justified in following suit. But the prevalent situation is infinitely more dangerous than if both states were openly declared nuclear powers. The arms race is continuing in South Asia but it is kept under wraps. By declaring themselves nuclear powers, the two nations can then claim to having a balance of power as well as deterrence. Then we can move towards limiting the number of warheads and nuclear weapons each country has and also seek verification of those figures. The ideal solution would be a verifiable nuclear-free South Asia. If that is not possible, then we need a nuclear doctrine urgently.

Two Nuclear Accords Signed With China

BK2202144192 Islamabad Radio Pakistan Network in Urdu 1400 GMT 22 Feb 92

[Text] Pakistan and China have signed two supplementary agreements concerning establishment of a 300-megawatt nuclear power plant at Chashma near Mianwali. The original agreement for the purchase of a nuclear power plant from China was finalized in Beijing in December last year. The agreements were signed by Dr. Ashfaq Ahmed, the Pakistan Atomic Energy Commission chairman, and Jiang Xinxiong, the general office leading member of China's Leading Group for Nuclear Power Plants. Prime Minister Mohammad Nawaz Sharif, who was present on the occasion, assured the government's total support for an early and expeditious implementation of the agreement and expressed the hope that the project will be completed on schedule.

Jiang said China will do its best to complete the project as scheduled and that the plant will be operated safely and effectively. He appreciated Pakistan's peaceful nuclear program, saying that Pakistan enjoys singular status among developing countries in the field of nuclear technology.

Australia 'Disturbed' at Nuclear Declaration

BK2102083292 Islamabad THE NEWS in English 21 Feb 92 p 12

[Text] Islamabad—Australia is deeply disturbed by Pakistan's admission to possession of nuclear weapons capability, the Minister for Foreign Affairs and Trade, Senator Gareth Evans said Thursday.

A press release issued here said that despite earlier repeated denials of the existence of a nuclear weapons research and development program, Pakistan's foreign secretary, Mr Shaharyar Khan, last week said in Washington that Pakistan now possesses all the components and technological expertise to assemble nuclear weapons.

"While the Pakistani foreign secretary appears to have been deliberately frank about his country's nuclear weapons program, which we welcome after years of statements which were less than this, Australia is nevertheless concerned about this confirmation of the international community's suspicions," Senator Evans said. "Pakistan's admission has essentially the same significance as India's detonation of a nuclear explosive device in 1974."

"Neither act contributed to the security of South Asia, and both challenge the international nuclear non-proliferation regime, which the overwhelming majority of the community of nations subscribes to as fundamental to their security."

"Pakistan's programme runs starkly counter to the current dramatic global disarmament and nuclear non-proliferation progress being experienced."

"Australia hopes that the greater transparency that now exists about the Pakistani nuclear weapons program will provide a basis for winding back and eliminating the nuclear rivalry in the region. Australia is optimistic that the current five power proposal may provide an acceptable basis for progress."

The United States is currently seeking agreement to talks which would involve India, Pakistan, China, Russia, and the United States in a wide-ranging exchange on security and nuclear non-proliferation issues on the subcontinent. Senator Evans said that Australia did welcome assurance by Pakistan that it had frozen its nuclear device, and that it would not transfer sensitive nuclear technology to third countries.

SYRIA

Qaddur Denies Soviet Nuclear Scientists Recruited

JN1502160492 Abu Dhabi AL-ITTIHAD in Arabic 12 Feb 92 pp 1, 21

[Text] Cairo—Nasir Qaddur, Syrian minister of state for foreign affairs, has stated that the Western media campaign concerning fears that Russian nuclear scientists may move to the Arab states seeks to keep Israel the only nuclear power in the region.

In a statement to an AL-ITTIHAD correspondent in Cairo following his participation in the Syrian-Egyptian committee meetings, Qaddur said that Syria has not thus far attempted to recruit nuclear scientists from the Commonwealth states. He pointed out that it is no longer a secret that Israel has now for years possessed nuclear weapons and that it seeks to disarm the Arabs so that it will end up the only dominant power in the region.

The Syrian minister cited the media campaign concerning the shipping of Czech tanks to Syria. He said the deal is an old one and that Israel has known objectives—namely, to be the only power dominating the region.

Despite this, he added, Germany, which held the freighter carrying the tanks to Syria, has emphasized that it does not intend to keep the weapons. He said that Germany pointed out that the matter does not directly concern Syria, but the freighter violated German law because it should have had prior approval to ship these weapons. He added that there will be a reasonable solution to this issue.

As for the recent visit by Hans Blix, director general of the International Atomic Energy Agency, to Syria, the Syrian minister said that his country is party to the

nuclear Nonproliferation Treaty and that it pointed out to the international official that Israel possesses nuclear weapons. He also said that Blix was further told that Syria will not employ nuclear energy for military purposes but rather for peaceful purposes to develop agriculture, industry, and research, and for other purely scientific purposes.

He said that his country requests that Israel sign the nuclear Nonproliferation Treaty and calls for declaring the Middle East a zone free of weapons of mass destruction, particularly nuclear weapons.

Kazakhstan Denies Nuclear Deals With Iran

924P0077A Moscow NEZAVISIMAYA GAZETA
in Russian 31 Jan 92 p 3

[Vladimir Desyatov article: "Why Did They 'Send' Nazarbayev to Tehran? The Nuclear Card Is Becoming a Strong Trump Within the CIS [Commonwealth of Independent States]"]

[Text] On 29 January the Republic of Kazakhstan Ministry of Foreign Affairs issued a statement firmly denying items published recently in the British newspapers DAILY MAIL and THE SUNDAY TIMES that Kazakhstan allegedly intends to sell nuclear ballistic missiles located on its territory to Iran, and that President Nursultan Nazarbayev has twice visited Tehran, where he supposedly conducted negotiations on this.

Some days previously the president's press service had spoken out in tones just as sharp. At that time the matter in question was pieces published in THE WASHINGTON POST and subsequently reprinted in IZVESTIYA, stating that the military is firing SS-19 missiles from the territory of Kazakhstan and that the leadership of the sovereign republic is not even aware of this. The items that were published openly cast doubt on the genuineness of the republic's sovereignty and its ability effectively to control its nuclear weapons and delivery systems. From there it is only a small step to the conclusion that for the sake of tranquility in Kazakhstan it should become a nuclear-free zone, and the sooner the better. With each passing day this psychological pressure is growing.

This is happening at a time when during personal meetings with the foreign ministers of Great Britain and France and the U.S. assistant secretary of state, Nursultan Nazarbayev is affirming that the republic has not retreated one iota from the obligations of the former Union on nonproliferation of nuclear weapons, and that in general it will strive in the future to acquire nonnuclear status. However, the time periods for this are not being indicated. As a benchmark, and even this is quite vague, the year 1998 is being mentioned. Interlocutors are listening carefully to the president and offering millions of dollars to accelerate the liberation of the republic from the nuclear plague. Nazarbayev does not have the money to dismantle the missiles, but he is doing everything possible to ensure that his guests leave Alma-Ata reassured and fully convinced that Kazakhstan's missiles present no threat to the world. The guests say that they are satisfied with the nature and results of the talks. However, it appears that the public in the countries they represent are incapable of overcoming the stereotype of the craftiness of people in the East, and new "canards" are appearing in the press all the time. One does not need to be a prophet to predict the appearance next week of some new sensation about a nuclear threat to the world emanating from the territory of Kazakhstan.

The situation has become delicate. Today it is absolutely clear that Nazarbayev is in no hurry to part with his

nuclear arsenal, but is likewise in no rush to take possession of the "nuclear button" and bring the delivery vehicles under his own control. Or even less sell nuclear weapons to neighbors. He is waiting. Until the revision of the major and most important targets is initiated there is no need to hurry. There are several reasons for this, and everyone knows about them. But they are not saying so aloud. By being deprived of its weapons, Kazakhstan, and, incidentally, Russia, will become a third-rate, impotent, and backward state—a rich source of resources for other countries. Nothing more. And except for condescending charity he can count on nothing. Moreover, it has turned out that within the CIS the nuclear card is increasingly becoming a strong trump. At present only on the psychological plane, but who can trust tomorrow?

So the position assumed by Nazarbayev, who is in no hurry to part with his nuclear potential but is also in no way forcing events, cannot be deemed healthy from Kazakhstan's standpoint.

Nazarbayev's press service, and now also the Ministry of Foreign Affairs, is reacting quite vigorously to any attempts to talk about this forbidden subject. And since he does not hold the initiative and has virtually no experience in such matters, this is not always being done in a delicate or sophisticated manner.

Perhaps in order to change the situation and seize the initiative he should take some out-of-the-ordinary step, for example, by refuting that missiles are being sold to Iran, but rather to Iraq, because it is paying more? Or that the departure of nuclear experts to work abroad is being encouraged in every possible way because 50 percent of the hard currency goes into the republic coffers? Then everything will certainly be put in its place. In any event, it would be perceived with understanding as an ancient warning that has finally come true. And, breathing a little easier, official circles among all the interest parties would initiate a meaningful dialogue with Kazakhstan as a full-fledged nuclear power.

Kazakhstan May Set Weapons Elimination Terms

OW1202184092 Moscow INTERFAX in English
1724 GMT 12 Feb 92

[Transmitted via KYODO]

[Text] At the meeting of the leaders of CIS [Commonwealth of Independent States] nations in Minsk February 14 Kazakhstan will most likely put its own interests first—those of national and state security—in the discussions on the elimination of tactical nuclear weapons. This was indicated in comments by those close to President Nazarbayev.

According to the sources, the liquidation of nuclear weapons is one of Nursultan Nazarbayev's main objectives. However, the government of Kazakhstan repeatedly stated that the process of the reduction of strategic forces must come under a single military doctrine for the

CIS, which does not yet exist but will be the topic of discussion at the Minsk meeting.

By some accounts there are 1150 strategical and 150 tactical nuclear warheads on Kazakhstan's territory. The dismantling of launch sites and transport of weapons to Russia is an extravagant undertaking for the republic (the budget deficit is 8 billion rubles). "We didn't become a nuclear state by our own initiative", said Nazarbayev during the January 25 visit of French Foreign Minister Roland Dumas.

Kazakhstan is caught between the nuclear tongs of Russia from the west and China from the east. There is also the threat from the Russian leadership on ethnic disagreements (only 40% of Kazakhstan is native).

As for China, the head of the sector of military construction in Kazakhstan, Viktor Shklyar, says there are 10 disputed regions from both sides. One proposed solution is to establish a radius of one thousand kilometers from the borders which will be nuclear free.

Experts in Alma-Ata believe that Kazakhstan will be forced to join the nuclear club in the near future; members of the club are responsible for each others security. This, the experts assert, does not contradict the Alam-Ata agreement of December 21, 1991 on "the cooperation in nuclear relations".

Kazakh President on Nonproliferation Treaty

Official Visit to Pakistan

*LD2402042392 Moscow TASS International Service
in Russian 0135 GMT 24 Feb 92*

[By ITAR-TASS correspondent Vladislav Legatsov]

[Excerpts] Islamabad, 24 Feb (ITAR-TASS)— "Welcome, Nursultan Nazarbayev" and "Pakistan Welcomes Kazakhstan's President" were the slogans decorating the streets of the Pakistani capital as the Kazakh leader arrived on an official visit 23 February.

Mutual understanding on a wide range of issues was reached on the first day of talks with Pakistani Prime Minister Nawaz Sharif. A wide range of international and regional issues and the prospects for setting up and developing bilateral ties was examined at the talks. [passage omitted]

Nazarbayev noted in his speech that Kazakhstan is fully prepared to restore old ties between neighboring states, broken several decades ago through no fault of Kazakhstan. He stressed that cooperation between Kazakhstan and Pakistan has great prospects, particularly in industry, transportation and communications, banking, cadre training, and in other areas. The president supported Pakistan's proposal to set up a nuclear-free zone in South Asia. He confirmed that his country wants to

eliminate the world nuclear threat and said that Kazakhstan, being a state with nuclear weapons on its territory, is ready to join the nonproliferation treaty. Nazarbayev highly assessed the Pakistani Government's economic reforms, saying that they are of great interest to Kazakhstan.

The talks continue today, and it is expected that a number of joint documents will be signed.

Seeks 'Parity'

*PM2402165092 Moscow IZVESTIYA in Russian
25 Feb 92 Morning Edition p 4*

[Nikolay Paklin report under the general heading: "After Nursultan Nazarbayev's Visit India and Pakistan Will Recognize Kazakhstan as an Equal Partner"]

[Excerpts] Delhi—The visit by Kazakh President Nursultan Nazarbayev to India and Pakistan stands out among a string of visits by leaders of CIS [Commonwealth of Independent States] states, which have been so frequent in recent months. Kazakhstan's leader, to all appearances, is interested not only in the ceremonies of opening embassies and raising the flag, but in more real and weighty manifestations of sovereignty. [passage omitted]

Nazarbayev was more vague in answering Indian journalists' questions on the nuclear strategy of Kazakhstan, on whose territory, as is well known, a considerable proportion of the former USSR's missiles with nuclear warheads are sited. While coming out in favor of the regime of nonproliferation of nuclear weapons, he stated that Kazakhstan proceeds on the basis of the principle of parity on the question of eliminating nuclear arsenals. Kazakhstan will be prepared to eliminate its nuclear potential only on condition that the United States, China, and Russia do the same. Judging by Nazarbayev's statement, it is from those states that the nuclear threat emanates. The president of Kazakhstan expressed the hope that Kazakhstan's scientists will cooperate with their Indian colleagues in the sphere of peaceful utilization of nuclear energy. [passage omitted]

Gamsakhurdia Warns of Nuclear Weapons Risk

Press Conference in Grozny

*PM2002150692 Moscow KOMSOMOLSKAYA
PRAVDA in Russian 20 Feb 92 p 2*

[A. Yevtushenko report: "Gamsakhurdia Comes Out of Hiding. And Disappears Again"]

[Excerpt] "There are nuclear warheads on Georgian territory. And I am afraid that they will go off," Zviad Gamsakhurdia stated at a press conference in Grozny. [passage omitted]

Charges Denied

*OW1902155392 Moscow INTERFAX in English
1410 GMT 19 Feb 92*

[Transmitted via KYODO]

[Text] Lieutenant General Sufiyan Beppayev, deputy commander of the Transcaucasian Military District, has described as "an open lie" Zviad Gamsakhurdia's assertion that there are nuclear weapons in Georgia. The general said that "there have never been, and there will never be any such weapons in Georgia."

The deposed Georgian president told a news conference in Grozny, Chechen-Ingush, on Monday [17 February] that missiles tipped with nuclear warheads were stationed on Georgian territory. Gamsakhurdia is staying in the Chechen republic for talks with its leader Dzhokhar Dudayev.

Georgia Claims Nuclear Missiles Present

*OW1702164692 Moscow INTERFAX in English
1617 GMT 17 Feb 92*

[Transmitted via KYODO]

[Text] The Chechen Republic's Information and Press Minister Movladiy Udugov told the press in Grozny that the Chechen leadership had information that CIS [Commonwealth of Independent States] forces stationed in Georgia had missiles with nuclear warheads.

He expressed apprehension that the weapons may fall into rogue hands, including "irresponsible persons or bandits since the situation in Georgia is not under control, said Udugov." [quotation marks as received]

Ukraine's Kravchuk on Nuclear Arms

*LD1402223392 Moscow TASS in English 2152 GMT
14 Feb 92*

[By BELTA correspondent—TASS]

[Text] Minsk February 15 TASS—The Commonwealth strategic forces, primarily nuclear ones, are subordinated to the Council of State heads of the Commonwealth and commander-in-chief of these forces Marshal Yevgeniy Shaposhnikov, Ukrainian President Leonid Kravchuk told a news conference on results of the Minsk summit.

By 1994 the issue of subordination of the strategic forces will not be on the Ukrainian agenda at all, since all the nuclear weapons will be removed from its territory by that time.

Touching on the mechanism of taking decision on the use or non-use of nuclear weapons, the president said special telephones have been placed in the Commonwealth member-countries' capitals. The telephones are connected with the "black box" for recording the content of negotiations between the presidents on this issue and monitoring of the stand of each side.

Weapons Transfer to Russia Going 'Smoothly'

*LD1402100192 Moscow TASS in English 0856 GMT
14 Feb 92*

[By ITAR-TASS correspondent Sergey Kuznetsov]

[Text] New York February 14 TASS—Commander in chief of the CIS [Commonwealth of Independent States] Armed Forces, Air Marshal Yevgeniy Shaposhnikov plans to press for "Extremely tough control over strategic forces and a milder form of centralization and control for conventional armed forces" at the Minsk meeting of CIS heads of state, scheduled for February 14. He said this in an interview with the American aerospace magazine "AVIATION WEEK AND SPACE TECHNOLOGY" in New York during President Yeltsin's visit to the United States. The interview was published here today.

Shaposhnikov said there were no problems with the implementation of the agreement reached by CIS heads of state last December in Minsk on the perpetuation of centralised control over the former Union's nuclear forces. He also reiterated earlier made assurances that tough control over tactical nuclear weapons would be continued.

"All these armaments will be concentrated on the territory of Russia by the summer of 1992," he stated. "As to the transfer of these weapons, the process is going on smoothly in accordance with the fixed schedules and without any complications.

"Some states believe only nuclear strategic forces are really strategic," he said. "Therefore, we are now conducting extensive explanatory work to make everything clear to our colleagues in various states."

The marshal warned that attempts by CIS states to divide the former Union's Air Force and to set up national air forces on their basis would inevitably produce a shortage of fuel and spare parts. "The reason is that planes are assembled and spare parts to them are produced on the territory of Russia, and we have not created any special mechanism for selling these parts to the republics, if they choose to have their own air forces," the marshal stated. "This is why I favour centralised control over the armed forces, otherwise "The defence ministers of these republics will be confronted with difficulties which, in turn, will bring hardships to the Air Force personnel."

Shaposhnikov noted that purchases of new military hardware for the Army were being cut and the saved money would be used to improve the living conditions of servicemen. "We are also reducing the serial production of hardware, since we were formally prone to press for quantity," he stated. "Now we must press for quality," Shaposhnikov noted.

The marshal said that the armed forces' spendings on research and designing were also being cut, but not so abruptly as expenditures on new hardware. "We must

not lag behind in the development of new armaments even though the danger of war has diminished substantially. But it has not been done away with completely," Shaposhnikov stressed.

He said the armed forces did not renounce their plans to build aircraft carriers and that they planned to continue work on new modifications of Su-27 and MiG-29 deck aircraft. At the same time, he stated that the programme for developing early radar spotting and warning A-50 planes was being revised. He said this aircraft proved inferior to the American analogue as regards tactical and technical performance.

'Full Public Control' Urged for Disarmament

*PM1702163792 Moscow PRAVDA in Russian
17 Feb 92 pp 1,4*

[Report by Vladimir Gubarev: "If You Have Bought an Atomic Bomb, Destroy It!"]

[Text] The myths, rumors, scandal, and speculation surrounding nuclear weapons are increasing every day. Hardly had the "nuclear brain drain" sensation faded, even though not one of the creators of the weapon has left to work abroad, than fresh "top-secret" information hit the newspaper pages: The Japanese are ready to buy up all the weapons-grade plutonium and "quickly reprocess it for the needs of the nuclear power industry, thus freeing themselves from the need to import oil and fuel." For information's sake, at the moment there are no effective techniques available for reprocessing weapons-grade plutonium, there is only research work and nothing else to speak of.

The politicians are not being left behind here, either. The Russian president's sensational statement on retargeting missiles away from U.S. cities has generated a host of bewildered questions: So where will they be aimed? But even that is not the main issue—unfortunately the president's advisers are making B. Yeltsin say the kind of things that cannot be carried out. That is why in Geneva the Russian foreign minister had to explain that the president has only put forward an idea, "launched a trial balloon, whereas in fact everything is far more complex." The air above the planet is quite thick with "nuclear trial balloons." J. Attali, president of the European Bank for Reconstruction and Development, has proposed that the USSR's debts be written off in exchange for our destroying our nuclear warheads. A figure has even been mentioned: \$60 billion. A generous gift, is it not? But if you take a closer look at nuclear disarmament problems, you will see that statements of this kind are mere declarations.

To destroy the vast arsenal of nuclear weapons stockpiled in the world will cost money—lots of it! Perhaps only slightly less than it took to create the weapons. The \$400 million which the Pentagon is promising are surely only enough to build a single storage facility. So let us not be deceived by the politicians' various statements—we are still a very long way from real disarmament, the pace

of nuclear weapons production remains high, and we still have not seen with our own eyes a single nuclear charge being dismantled and destroyed.

Furthermore, with the disintegration of the Soviet Union a danger has arisen not so much of the "leak of nuclear technologies" that people are talking about so much as of a slackening of control over the nuclear monster. The "voyages" of nuclear charges from Ukraine and Belarus to Russia, the absence of secure depots, and finally the complete unpreparedness for the dismantling and storage of warheads on such a scale all sharply reduce nuclear safety. Even though the military are trying to avoid publicity because they fear the public, some information on the inauspicious situation is getting through. And we learn about this "from abroad." They are not letting us, their own country's journalists, have access, arguing that everything in this sphere is classified. Whereas for U.S. specialists the doors of the most closed installations are suddenly flung wide open. Recently some visitors from across the ocean visited a tactical nuclear weapons dump (they were invited to "one of the best"). The Americans were horrified at what they saw!

I am deeply convinced that nuclear disarmament must be under full public control. Moreover, with the public's most active participation, financing included. Let us not harbor any illusions: The Russian leadership, like the U.S. Administration, does not now have the means to implement its planned programs. And if the government's attitude toward nuclear physicists does not change in the very near future, there will simply be no one left to carry out nuclear disarmament. In the press and on television, both at home and abroad, there are reports that the threat of unemployment hangs over "Chelyabinsk-70," "Arzamas-16," and other nuclear centers in Russia and that physicists will be reduced to "beggary" and "starvation." They are even collecting humanitarian aid for them in the United States and Europe and some charitable foundations are prepared to "pay them extra in freely convertible currency." In my view, everything has been turned upside down in the present situation. In fact, there are no financial centers. Yes, specialists' pay is miserly by present-day standards. Yes, the solution of the fate of our atomic ministry has been delayed and there is a bureaucratic fuss being created over the appointment of a leader for the new department. All these things are true. And this is the nuclear physicists' calamity.

It is a great good fortune that specialists have an incredible degree of self-restraint—none of them has left and collectives have not disintegrated because people, unlike the government, understand very well how great the responsibility resting on them is—above all for the world's nuclear safety. Specialists such as those employed at "Arzamas-16," for example, will have no particular difficulty finding work. Any of our firms will pay them just as much as they will earn abroad. But if the designers and engineers from the nuclear centers leave there will be problems for the government and the peoples of Russia because they are the only ones capable of dismantling

and neutralizing the nuclear charges. Pray God that this principle is not breached: Then we will not only have Chernobyl and Kyshtym on our land, there will also be Russian Hiroshimas and Nagasakis.

The public has held out a helping hand—we have decided to enlist private capital in disarmament. The “nuclear auction” project (see PRAVDA for 14 and 28 December 1991) envisages the destruction of actual nuclear charges and the financing is to be carried out by firms and concerns, private individuals and social organizations.

The first to approve the draft were specialists themselves, whom some mass media are calling “blind hawks.” It is they who prepared the plan for dismantling the charges and bombs in such a way that the whole process could be displayed to the public at large and at the same time prevent a leak of information—the Treaty on the Nonproliferation of Nuclear Weapons must be observed in full and in all respects! The International Federation of Peace and Accord, the M. Gorbachev Foundation, the concern headed by M. Bocharov, the “Doveriye” firm, 20 enterprises and organizations belonging to the “Neizvestnyy kosmodrom” joint-stock company, the small-scale enterprise “Vityaz,” the “Nekos” RIA [expansion unknown], plants in the Urals, combines in Kazakhstan, and many of our readers are ready to take part most actively in implementing this project.

The Western firms about which we have already reported (“Lare” from Italy, the “Kuzin Grupp Interneyshnl” from Austria, and Khink [company names as transliterated] from the United States) are being joined by others. On the eve of the auction for the right to destroy the first nuclear charges (and we are sure: it must take place!) we will publish a complete list of participants. It seems to me that the general mood was captured by the president of an Indonesian goldminers’ concern, whose letter we received yesterday.

“Recently we learned about your program for the destruction of nuclear weapons, known as ‘I am buying a nuclear warhead.’ The idea expressed recently by Austrian Chancellor Vranitzky on the acquisition of weapons in the CIS countries and their subsequent destruction caught our attention by its extraordinary nature and profound common sense.

“Having analyzed the firm’s financial potential and counting on the earliest and fullest destruction of nuclear weapons not only in the countries of the former socialist camp but throughout the world, our Indonesian goldminers’ concern has decided to acquire a few warheads from the most destructive Soviet missiles, the SS-17, SS-18, SS-19, and SS-22. In our view it would be sensible to begin with the destruction of the latest warheads, including mobile forward-based systems, intermediate-range, and ICBM’s.

“The firm’s board is ready to use up to 14.5 percent of net profit for the above mentioned purposes, amounting to several billion U.S. dollars.

“We hope that the successful implementation of this program will help to strengthen peace and rid mankind of the threat of its total destruction as quickly as possible.”

Interesting, is it not? In far-off Indonesia, Australia, and South America, from where we also received evidence of a desire to take part in the “nuclear auction,” people are attentively following events connected with disarmament in one-sixth of the world. Furthermore, they are ready to come to our aid. But so far the answer has been silence because some people are still convinced that the best, correct ideas originate only within the Kremlin’s walls.

Republics’ Locations of Nuclear Materials Eyed

924P0066A Moscow MEGAPOLIS EKSPRESS
in Russian No 2, 9 Jan 92 p 22

[Article by Sergey Morgachev: “Plutonium Is a Friend, But Truth Is More Costly”]

[Text] Along with their independence the republics have received as their property many objects involved in the nuclear production cycle. In addition, they have on their territories both strategic nuclear weapons (Ukraine, Kazakhstan, Belarus) and tactical nuclear weapons, whose locations remain a state secret. The agreement on joint measures on nuclear weapons signed by the CIS [Commonwealth of Independent States] countries on 21 December by no means resolved all the problems.

The disintegration of the Soviet Union first of all raised with great urgency the question of where and in whose hands tactical land-based nuclear weapons would be. The arsenal of tactical missiles on the territory of the USSR now includes the SCUD-B (at the beginning of 1991 there were 661 launchers and 1,370 warheads), the FROG-7 (370 and 1,450), and the SS-21 (300 and 310). The most modern weapon is the SS-21, put into service in 1978. Before the start of the catastrophic disintegration of the USSR, tactical missile weapons were deployed at least in the Belorussian, Transcarpathian, Kiev, Odessa, and Turkestan Military Districts, and, of course, in Russia. Western military sources also registered sites where nuclear-capable tactical air forces were based. We are talking about the MiG-27 fighter-bomber (725 aircraft), the Su-17 (600), and the Su-24 (875). Each of them can carry one or two nuclear bombs; the arsenal of those bombs totaled about 2,500 at the beginning of 1991. In addition to Russia, these types of aircraft were deployed in the Belarussian, Transcarpathian, Kiev, Odessa, Transcaucasus, and Turkestan Military Districts.

With respect to nuclear artillery shells, mines, and air defense missiles, and also Naval weapons, information on their location never percolated beyond the military

establishment. But it was possible to assume with a very high degree of probability that they were deployed in most military districts. This was essentially confirmed in December 1990 by Marshal Akhromeyev, who stated the following: "Tactical nuclear weapons are deployed in virtually all the Union republics." The top military leadership had for a long time preferred to admit nothing officially, nor deny anything, assuring everyone (as, for example, Marshal Shaposhnikov has) that "the nuclear button is in reliable hands" and that no one "at the local level" can lay claim to this. Even until very recently we were aware only of the statement issued late in 1990 by the commander of the Transcaucasus Military District that there were no nuclear or chemical weapons on the territory of the district. The agreement on joint measures with respect to nuclear weapons finally stated officially that tactical nuclear weapons were located in Belarus, Kazakhstan, and Ukraine, and it was made a mandatory obligation for them to ensure their withdrawal into Russia by 1 July for dismantling. But the fate of tactical nuclear weapons on the territories of other Commonwealth countries remains unclear.

Another layer of the problem of nuclear safety arising as the result of the breakup of the state is connected with the component parts of the nuclear military cycle and the nuclear fuel cycle ending up in the hands of the now independent republics, and this is a cause for legitimate concern in the international community.

The uranium mines and the plants that produce uranium concentrate are located in Russia (the Urals, and Krasnokamensk in Chita Oblast), in Ukraine (Kirovograd Oblast, Zheltyye Vody), Kazakhstan, Uzbekistan (Yangi-Abad), Kyrgyzstan (Tonskiy Bay at Issyk-Kul, Kadzhi-Say, Min-Kush, and Tyuyamuyun), Tajikistan (Taboshar), and Estonia.

All the uranium-enrichment capacities for power purposes are located in the Russian Federation (production of highly enriched uranium for military needs was halted in 1989). Production of plutonium for military purposes is also concentrated in Russia—Chelyabinsk, Krasnoyarsk, and Tomsk—as is the production of the munitions themselves (the most well-known facility is Arzamas-16 in Nizhegorod Oblast). According to Western figures, at the beginning of 1989 weapons-grade plutonium was being produced by 14 reactors, of which at least five (this is now according to Soviet figures) have been closed down.

As is known, however, plutonium is formed as the result of the reaction in power and research reactors...Soviet nuclear power stations [AES] using channel-type graphite moderated reactors and pressurized water reactors are less "productive" from the standpoint of the plutonium produced than, for example, reactors employing heavy water as the moderator. All reactors designed to generate electric power, however, produce plutonium contaminated with the isotope Pu-204, while usually, for the manufacture of nuclear weapons almost pure Pu-239 is used. But in principle even this is no

obstacle to the use of exhausted fuel for military purposes; true, capacities are then needed to separate the plutonium from it. In addition to Russia, AES are located in Lithuania (the Ignalinskaya AES), and Ukraine (the Rovenskaya, Yuzhno-Ukrainskaya, Zaporozhskaya, and Khmel'nitskaya AES). A statement of intent has been issued to re-open the Armyanskaya AES. At Shevchenko on the Mangyshlak peninsula (Kazakhstan) the USSR's first industrial fast-neutron breeder reactor is located; it operates both as an AES and as a water distillation plant, and as a producer of plutonium for subsequent use in power breeder reactors. In the future this reactor itself should be switched to use plutonium fuel...

As far as research reactors outside Russia are concerned, they are functioning in Tashkent, Kiev, Tbilisi, Riga, Minsk, and Alma-Ata and they belong to institutes of the republic academies of sciences. The facilities in Tashkent, Tbilisi, Riga, and Minsk use 90 percent enriched uranium, that is, they are immediately suitable for the manufacture of nuclear weapons. From the standpoint of facilities for producing plutonium the capacities of these reactors are significant, and the reactors at Tashkent, Kiev, and Alma-Ata, which are in the 10-20 megawatt range, are quite powerful research facilities. One of the most "sensitive" materials from the standpoint of production of nuclear material is so-called heavy water (D₂O). It is reported that the Agrokhimservis company, which is engaged in the export of this product, is now the only functioning plant producing it; it is located at Dneprodzerzhinsk (Ukraine). However, it is generally thought in the world that our capacities for producing heavy water are much more significant. For example, in an article published recently in MOSKOVSKIYE NOVOSTI, the director of the Center for Russian and Soviet Studies in Monterey (United States), Potter, writes that major capacities for the production of heavy water and the smelting of beryllium and zirconium (which are also essential for the production of nuclear weapons) are located in republics where Muslim populations predominate. As far as zirconium is concerned, according to other Western information it is also recovered in Ukraine.

The republics of the former USSR have received a quite dangerous nuclear legacy. The 21 December agreement between the member countries of the Commonwealth of Independent States obligated Ukraine and Belarus to sign the Nuclear Nonproliferation Treaty as nonnuclear states. But the nuclear status of Kazakhstan and other Commonwealth of Independent States member states, except for the Slav republics, must be shaped according to all international rules. Their signing of the nonproliferation treaty and agreements with the International Atomic Energy Agency would, however, be impossible at the present time.

Separate Missile, Nuclear Warheads Proposed*PM1302190092 Moscow IZVESTIYA in Russian
14 Feb 92 Morning Edition p 7*

[Report by Maksim Yusin: "Russia Offers To Separate Nuclear Warheads From Missiles"]

[Text] Geneva and Moscow—The high point of Russian Foreign Minister Andrei Kozyrev's lightning visit to Geneva 12 February was two speeches—one at the disarmament conference, and one a few hours later at the UN Commission on Human Rights.

Kozyrev Explains and Clarifies Yeltsin's Disarmament Initiatives

Kozyrev's speech at the Disarmament Conference provided for the West something of an explanation and clarification of Boris Yeltsin's recent initiatives, which shook the world but left many questions unanswered. After the Russian minister's speech there were fewer unclear points.

For instance, he admitted, in effect, that CIS [Commonwealth of Independent States] strategic missiles are still targeted on the United States, and although the political decision has been made, its implementation is a matter for a fairly lengthy period. (Hitherto experts were mystified as to how thousands of missiles could be retargeted overnight.)

Through Kozyrev, Moscow put forward new ideas in the disarmament sphere. According to members of the Russian delegation, it is not yet a question of specific proposals that must be implemented within a given time scale. "We launched a kind of trial balloon, indicating the main avenues along which the disarmament process could proceed. We do not expect an immediate response to our proposals," one Foreign Ministry expert said.

Moscow Calls for "Zero Combat Readiness" To Be Achieved

Russia's initiatives attracted much attention among the foreign mass media and experts. Two points in particular are singled out. First, it is proposed to remove entirely from alert status the missiles belonging to Russia, the United States, and other nuclear powers that are targeted on one another. In other words, that "zero combat readiness" be achieved. Though Russian diplomats admit that it is extremely difficult to verify [prokontrolirovat] missile guidance computer programs.

The second proposal is for missiles and nuclear warheads to be stored separately. As the delegation experts explained, the crux of the initiative is to ensure that weapons and delivery vehicles are far enough away from each other and that any movement could be picked up by satellites. In Kozyrev's opinion this would provide guarantees against "unauthorized or accidental use of nuclear weapons."

The Russian minister echoed the point expressed by Yeltsin in London and Paris, that Moscow does not insist that the other nuclear states—France, Britain, and China—should immediately join the rapid Russian-American disarmament process. "This question will become relevant when the nuclear arsenals are comparable," Kozyrev noted.

He stressed that Russia's disarmament initiatives were agreed beforehand with the CIS partners.

Moscow reaffirmed its readiness to get rid of chemical weapons, but not everything is going smoothly on this matter. Disagreements have arisen between Russia and the United States, which Kozyrev referred to, although he did not mention the Americans specifically. Washington is demanding the destruction of chemical weapons production plants on Russia's territory. Moscow objects, arguing in justification that these plants have already begun to produce peaceful output and that their closure is impermissible in the crisis conditions afflicting the country.

Instead of demolishing the unfortunate plants, Kozyrev proposed that authoritative international inspection teams be sent to Russia, who could dispel Washington's suspicions if any arise. In the opinion of Russian diplomats, certain nuances in the Americans' behavior at recent consultations allow us to assume that they will ultimately agree to that option.

Russia Will Deal in Weapons "On a Commercial Footing"

In his speech Kozyrev touched on the sensitive topic of the weapons trade, which diplomats (and not only ours) usually try to avoid. As he put it, Russia will not abandon arms sales, but henceforth this will take place "on a commercial footing." The minister stated that Moscow will avoid arms deliveries to unstable regions, unlike in past years, when Soviet weapons were sent mainly to ideological allies and not infrequently to the planet's hot spots.

Kazakhstan's Position on Nuclear Weapons Is Not Boosting the Republic's International Prestige

Touching on one of the most sensitive topics—the fate of the nuclear missiles sited in Kazakhstan, Belarus, and Ukraine—Kozyrev repeated Russia's well-known position: "We proceed on the basis that those three republics will accede to the Treaty on the Nonproliferation of Nuclear Weapons." Ukraine and Belarus have already made such a promise, as is well known, but Kazakhstan's position is still unclear.

Talking with journalists on board the plane, Kozyrev said nonetheless that he remains optimistic about the Kazakh nuclear weapons. "Kazakhstan has no alternative but to accede to the nonproliferation treaty. Maybe some people are suggesting to Nazarbayev that by leaving this question hanging, the republic can score points in the international arena. If so, these are patently

unskilled advisers. The longer the mystery continues, the more severely the country's prestige will suffer. Nonproliferation of nuclear weapons is too serious a question for the world to tolerate vagueness. Credits and foreign aid could be jeopardized. When the Americans became suspicious about the Pakistani nuclear program, they applied sanctions against their own close ally."

Kozyrev clarified his terminology. In his opinion the Ukraine, Belarus, and Kazakhstan cannot be called nuclear countries, since Russia is the sole successor to the USSR in this respect. The other three republics have therefore acquired the status of "states on whose territory nuclear weapons are sited."

A few hours before leaving for Moscow Kozyrev spoke at the UN Commission for Human Rights. It was the first time in history the head of our diplomacy had taken part in such a session. In past years, for obvious reasons, Soviet representatives used to avoid this commission. Kozyrev set forth the view of the new Russia on human rights. Judging from the initial reaction, the UN experts were satisfied.

Burbulis Meets With CERN Nuclear Scientist

Brain Drain Topic of Proposal

*OW1002200992 Moscow INTERFAX in English
1934 GMT 10 Feb 92*

[Transmitted via KYODO]

[Text] Russia's First Deputy Prime Minister Gennadiy Burbulis has received the Director General of the European Organization for Nuclear Research [CERN] (headquartered in Switzerland) Nobel Prize winner Carlos Rubbia.

Mr. Rubbia is the brain-father of the idea of giving assistance to Russian nuclear scientists. He put forward the proposal in the wake of growing fears in the West that brain drain from the CIS [Commonwealth of Independent States] member states may result in the leak of nuclear technologies.

Mr. Rubbia has told IF [INTERFAX] that he has arrived in Moscow in order to cooperate with his Russian colleagues and to strengthen contacts by every possible means. However, he avoided disclosing the details of his proposals.

After Gennadiy Burbulis's talks with Professor Rubbia the Russian Science and Technology Minister Boris Saltykov who took part in them told IF that he was satisfied with the results.

He said that Russian science would be able to send its bright brains to work at the CERN facilities. He said that 20 to 25 physicists would be able to work there every year. "This will not resolve the brain drain problem completely, but prove very helpful", the minister said.

Joint Ventures Discussed

*LD1002202192 Moscow TASS International Service
in Russian 1834 GMT 10 Feb 92*

[By ITAR-TASS correspondent Ivan Ivanov]

[Text] Moscow, 10 Feb (ITAR-TASS)—Russia is the USSR's legal successor in all accords reached on its participation in the work of the European Organization for Nuclear Research (CERN). This was stated today by Gennadiy Burbulis, state secretary of the Russian Federation and first vice prime minister of the Russian Cabinet, at his meeting with Carlo Rubbia, CERN director general and Nobel Prize winner.

Carlo Rubbia initiated the establishment of an international fund for supporting basic research in Russia aimed at rendering direct Western financial aid to scientists who continue to work in Russia at a world level. He also made a decision to grant financial support from the 1992 CERN budget to Russian scientists who work in CERN on joint projects.

Gennadiy Burbulis expressed gratitude to Carlo Rubbia for his constructive approach and initiatives.

Shaposhnikov on Combat Alert Status of Weapons

*MK1202080192 Moscow NEZAVISIMAYA GAZETA
in Russian 12 Feb 92 p 2*

["Army" Interview with Marshal Shaposhnikov, commander in chief of CIS, Commonwealth of Independent States, Joint Armed Forces, by Sergey Parkhomenko; place and date not given: "Marshal Shaposhnikov: 'Russian President's Statements Are Political Statements...' Commander in Chief of CIS Combined Armed Forces Answers NEZAVISIMAYA GAZETA Correspondent's Questions"]

[Excerpt] [Parkhomenko] Yevgeniy Ivanovich, I think that you have had to answer this same question countless times of late: Where are the Commonwealth strategic forces' ballistic missiles that the Russian president mentioned in his recent statements pointing now?

[Shaposhnikov] The missiles mentioned in the text of the Treaty on Strategic Offensive Arms Reduction have simply been taken off combat alert and are no longer pointing anywhere.

The other missiles that have not as yet, so to speak, been affected by the reduction mechanism are still on combat alert. I must point out here that Boris Nikolayevich's well-known statements are political statements. Some time elapses between a political statement and its concrete—practical and technical—implementation. Therefore at the moment I can only say that the level of combat alert readiness has been reduced. There has been no retargeting as such.

In response to all the questions about the overall situation regarding the former Union's strategic and tactical

nuclear weapons I can only say this: Despite certain disagreements over the future of and principles governing the use of the general-purpose Armed Forces, the leaders of the sovereign states have nonetheless manifested sufficient responsibility and restraint to take a very serious attitude to the nuclear forces.

The situation with regard to strategic weapons is totally clear today: They are under unified control, under unified command. There is also an agreement on tactical nuclear weapons (at present apart from Russia they are only to be found in Ukraine, and a small quantity in Belarus). These weapons are currently all being taken back to Russian territory. By mid-summer this year this withdrawal will have been completed.

The future of these weapons is another matter. As you know, we intend to reutilize [utilizirovat] or dismantle [razdelyvat] these weapons—in line with existing accords. Weapons-grade plutonium and uranium are to be turned into nuclear fuel to be used for peaceful purposes. Some Western states are offering us a very long list of services here: transportation, storage, protection [sberezheniye], and, last, reutilization. But we have quite enough experience in these matters. We have, after all, already removed nuclear weapons from Europe, from the Transcaucasus, and from the Baltic....

We find most interesting the offers of technologies to "reorient" nuclear weapons, uranium, and plutonium to peaceful purposes. We will see how appealing they are. If they look more advantageous and reliable than our own, we will not ignore the services offered by our Western partners.

Another serious question that our colleagues in the West are constantly asking concerns the position of our nuclear physicists. Boris Nikolayevich tried to find a solution to the problem when he met with a large group of scientists before his trip to the United States. The first thing that they agreed upon there was to develop a mechanism of social security for specialists, increase their wages, and so on. The second is that nuclear specialists will be provided with work linked with reutilizing nuclear weapons and using military technologies and materials for peaceful purposes. [passage omitted]

UK Experts To Help Dismantle Arsenal

LD1102072292 Moscow TASS in English 0616 GMT
11 Feb 92

[By ITAR-TASS correspondent Rostislav Gertsev]

[Text] London February 11 TASS—A group of British experts, representing ministries of foreign affairs and defence of Great Britain left on Monday [10 February] for Moscow for consultation and help in destroying a part of Russia's nuclear arsenal.

The team of specialists will concentrate its attention on those problems, in solving which according to the Russian authorities, Western help is most needed.

The main object of the British experts, in particular, will be control over the nuclear warheads. According to the British specialists, there exists a danger of loosening control over the warheads during the process of their dismantling, transporting and storing.

PRC Decides To Restrict Missile Exports

OW0802191692 Moscow Radio Moscow in Mandarin
1000 GMT 8 Feb 92

[From the "Current Events and Commentary" program]

[Text] Listeners, China has made a written statement reiterating its decision to abide by international agreements on restricting exports of ballistic missiles and rocket technology. This was asserted in a report published by AFP. In this connection, our observer Alekseyev wrote a commentary.

Listeners and friends, let me review the essence of this issue and the circumstances that gave rise to it. In the fall of 1991 the U.S. State Department began to impose economic sanctions against China on the basis of a report that China exported to Pakistan launching equipment for ballistic missiles. The sanctions included a ban on providing China with certain modern computer technology. Since then, the United States and other Western countries have held that China has not been assuming responsibility for nonproliferation of ballistic missiles and rocket technology; for this reason they have been disturbed. They also pointed out that as the situation is still unstable and conflicts still exist in some areas—most of all in Asia—exporting rocket technology to these areas will bring about extremely dangerous consequences.

It should be pointed out that the emergence of modern ballistic missiles in Pakistan will certainly create danger.

When U.S. Secretary of State Baker made his first trip to Beijing in November last year, he mentioned certain issues, including the issue of China's export of ballistic missiles and rocket technology. Baker hinted that the improvement of U.S.-Sino relations will depend to a large extent on Beijing's attitude toward this issue—which the United States and many other countries are concerned about. At that time the Chinese leaders assured the U.S. Secretary of State that China had no intention of exporting rocket technology to Pakistan or any other country. According to reports by various news agencies, the assurance failed to satisfy the U.S. guest of honor. Baker said the United States will be able to discuss the question of abolishing the relevant ballistic missile sanction only if Beijing makes a written statement. Now the U.S. State Department has received an official letter from Beijing reaffirming the above assurance. Baker was satisfied with the letter. He told the press that a careful study of the letter is needed, but he believed that Beijing had taken a correct and important (step). He said that if this is true, the United States is prepared to cancel the sanctions whose imposition began

in the fall of last year. Thus, one of the obstacles hindering the improvement of U.S.-Sino relations will be removed.

EC To Aid Russian Nuclear Scientists

*LD1702180692 Moscow TASS in English 1658 GMT
17 Feb 92*

[By ITAR-TASS correspondent Gennadiy Petrov]

[Text] Lisbon February 17 ITAR-TASS—The European Community's ministers of foreign affairs today decided to take part in establishing an international centre in Russia to help convert scientists and specialists from the military-industrial complex to peaceful pursuits and prevent the brain drain that threatens proliferation of nuclear technologies.

The proposal was made by the foreign minister of Federal Germany Hans-Dietrich Genscher during the EC Ministerial Council in Lisbon.

Genscher said the United States will provide 25 million dollars to build the centre and finance its projects and the European Community will allocate 50 million ECU [European currency units].

Warsaw Pact Plan for Nuclear Weapon Use Noted

*924P0079A Moscow IZVESTIYA in Russian 5 Feb 92
Morning Edition p 4*

[Report by Yevgeniy Bovkun: "The Danger From the East: What Was It?"]

[Text] Bonn—Studying archives from the GDR National People's Army that have come into their hands, experts in the Defense Ministry in Bonn have learned what kind of danger the population of the FRG would have faced in the event of armed conflict with the Warsaw Pact.

Even before this the nature of the weapons and the military doctrine, and also the location of troops of the USSR and its allies were known thanks to data from Western intelligence. Notwithstanding, the documents that the FRG defense minister, G. Stoltenberg, made public recently have produced a strong impression.

At the start of military actions between East and West, regardless of who first decided to test the enemy's defense, the Warsaw Pact would have poured the fire of 76 nuclear strikes on Schleswig-Holstein alone. The other lands in Germany would have been subjected to destructive bombardment and missile fire using nuclear warheads, first and foremost Lower Saxony, and also the northern regions of Hessen and Bavaria.

The Warsaw Pact leaders planned to use nuclear weapons at the earliest possible stage of the conflict, right at the start of the war. The groups of forces deployed along the forward positions were to have had more than 840 tactical nuclear weapons.

How much effort official Soviet propaganda made at that time to try to prove to the world public that no danger of any kind from the East threatened people in the West. It has now become clear that it was much more real, even in the years of perestroika. However, let us be fair: They were not playing with toy weapons in NATO headquarters either.

Experts View Nuclear Arms Export Policy

*PM1702135992 Moscow KOMSOMOLSKAYA
PRAVDA in Russian 14 Feb 92 p 3*

[Article by A. Khokhlov: "Tank Attack on the Market: Military Experts on Prospects for the Sale of Russian Weapons"]

[Excerpts] It seems that a method capable of enabling us to overcome the crisis has been found. The superpower used to produce countless quantities of tanks, planes, and ballistic missiles, which were the equal of the best in the world. [passage omitted]

The place in the market vacated by us is now being actively fought over, on the one hand, by Austria, Israel, Switzerland, and Sweden, and on the other by Brazil, Singapore, and South Korea. The former have managed to create powerful military-industrial complexes of their own, the latter are producing tanks under license. In 10 years the Brazilians have sold weapons worth \$4.5 billion. But both the former and the latter are being pressured by China and North Korea.

In short, it is a bazaar in which Russia today, with its sales of weapons worth \$4 billion (in 1986 prices) instead of the pre-perestroika \$18 billion, looks like Cinderella selling violets. However, there is an opportunity to rectify the material position.

Here is what Sergey Akimov, a military expert and staffer of the Central Institute of Military Technical Information, says:

According to Western estimates, the Near East countries' total demand for military imports in 1992-1995 could reach \$127.4 billion. Admittedly, most of the countries of that region are militarily oriented toward the United States, France, and Britain. But it is possible to compete for contracts.

In the opinion of leaders of the Russian Industry Ministry, we can sell weapons worth \$15 billion-\$30 billion a year. But will we be able to?

There are at least two problems: political and economic.

The former confrontation between the USSR and the United States could be viewed any way you like but it did have an undoubted plus: Geostrategic equilibrium was maintained in the world. If the USSR supplied a consignment of MiG's to India, the United States hurried to sell Phantoms to Pakistan, and vice versa—across the world.

The Americans are using our present weakness to their advantage, which has already led to an imbalance. Future Russian expansion in the arms market threatens to make the process uncontrollable. Especially since in our country they are prepared to farm out the arms trade to the producers.

Yuriy Malkov, a military expert and a staffer of the Central Institute of Military Technical Information, gives his view:

The U.S. Congress adopts a law on each major contract. In Russia there is no law yet on weapons trading at all. There are so many people responsible for the preparation and conclusion of contracts: the CIS [Commonwealth of Independent States] Armed Forces Main Commissariat, the Foreign Ministry, the Russian Industry Ministry. The procedure for issuing licenses has not been worked out. Enterprises in the military-industrial complex left without state funding and under lax state control will undoubtedly seek to enter the world market. But through whom will they do that? Only through intermediary firms which could tomorrow sell weapons in the world's trouble spots, which now include republics of the former Union, too. I do not think that the West will choose to ignore that.

Military expert Sergey Akimov:

Military-industrial complex plants will inevitably begin to compete among themselves and drive down prices. Furthermore, being ignorant of market conditions they will lower their prices any way. Probably the United States and Europe will resort to antidumping measures: They will completely shut off our access to the market. Arms trading must remain the prerogative of the state.

Purchasers are also demanding state guarantees of us today. Recently there was a scandal: A military plant "directly" promised to supply several planes to a country. When the time came to dispatch the consignment it turned out that the aircraft were... still not ready.

The main problem facing the export of Russian weapons is this: What can we sell? It is impossible to send output straight off the production line or sell batch-produced models. Even the most impoverished Third World country will demand a tank or antitank guided missile in export version. Just to "convert" the instrument panel in a MiG cockpit from Russian to Arabic, for example, will cost 2.5 billion rubles. The Russian Government is not averse to receiving hard currency for military-industrial complex output but has refused to finance it.

The only things that we can sell quickly and with no problems now are firearms and ammunition.

Military expert Sergey Akimov [repetition as published]:

Of course, we can sell tanks, too, but only at scrap metal prices....

Incidentally, this is not the worst option. After the reduction of armed forces and armaments in Europe, the

United States sold 600 tanks to Egypt at the price of transporters. This was the right thing to do. Reducing a tank to scrap metal costs more than the metal itself is worth. Unfortunately, Russia has opted for scrapping....

While repenting of past mistakes, let us not commit new ones. When the USSR sold weapons it showed scant concern for long-term maintenance programs. The United States took and still takes a different path: One-third of U.S. arms exports take the form of services. As a rule, the United States sells Phantoms as a "package" with the construction of airfields and the training of air and ground crews and specially stipulates the sale of spares. Such contracts are considerably more advantageous than one-off sales.

Our practice (both past and present) was to sell and forget. Thousands of firms have been making a good living out of our "forgetfulness." Britain's Royal Ordnance company developed and produces 105 mm guns for our T-55 and T-60 tanks, and the world is full of them. British Aerospace is beginning to supply MiG spares to Hungary. One can only guess at the "dog fight" that is now going on over supplies of spares to India. Some 80 percent of its army is equipped with our hardware....

We have no panaceas. But there is no reason to stop exporting weapons. All that we can sell today is oil and tanks. Will that be enough?

Footnote: The Central Institute of Military Technical Information, which has a unique store of information and experienced cadres, is now under the threat of a 35-percent reduction....

Chelyabinsk-70 Nuclear Brain Drain Examined

МК0802141592 Moscow ROSSIYA in Russian No. 6,
5-11 Feb 92 p 8

[Sergey Belkovskiy article: "I Swap Chelyabinsk For Iraq. Is That Scenario Possible? Nuclear Specialists Themselves Answer the Question"]

[Text] Chelyabinsk-70—The Soviet nuclear "brain drain" to Third World countries will enable the latter to make appreciable advances in developing their own nuclear weapons. These forecasts and misgivings have become more frequent of late in foreign publications. Possibly Western countries and the United States are trying to turn our attention to the problems facing nuclear scientists, talk of which in the land of Chernobyl arouses irritation more often than understanding. Nonetheless this is a sector that must not be affected by the process of disintegration that has encompassed the former Union. Nuclear disintegration could be highly dangerous. Both for us and the world around us.

The VNIITF is in the Urals in the "closed" city of Chelyabinsk-70 surrounded by barbed wire. The gate to the city is a checkpoint; armed soldiers greet you here. The abbreviation VNIITF in Russian stands for—

All-Union Technical Physics Research Institute. It is due to this institute that this city appeared in the southern Urals.

We have gotten accustomed to thinking that big science is located in either Moscow or the other capitals. Until recently there was nothing in the newspapers about Chelyabinsk-70, a city the size of a rayon center, and you will not find this city on a map. However, it was here that the cream of nuclear science gathered. Here and in Arzamas-16....

There was a time when the residents of "70" were known as the "chocolate people" [shokoladniki]: They supplied their relatives in the "world outside" with food and other things. Now there is none of the former abundance, and everything is supplied strictly on production of ration cards and coupons. All that is left of the good old days is amazingly clean streets, literally crammed with automobiles (there is hardly another city like it in Russia in terms of the number per capita). And Chelyabinsk-70 is a good city in terms of its crime level. It is not frightening for a lone individual to set off into the pine woods scattered alongside the blocks of housing. It is a stone's throw to Lake Sinara. In summer you can get a tan and swim. The air is clean and fresh....

KOSSIYA's correspondent is one of the first journalists to visit this city and meet the people who were for so long fenced off and stamped "Secret." Before it would have been impossible to interview them.

"Now we can give an interlocutor our own visiting card:" I held a rectangular card in my hand and read "Doctor of Physics and Mathematical Sciences Vadim Aleksandrovich Simonenko, branch chief."

"I recently met U.S. scientists in Kiev and they asked outright: How possible is it for nuclear specialists to go to Third World countries?" Simonenko said. "So it is not only from newspapers that I am aware of this alarm abroad."

"Unlike Western nuclear scientists, ours are not narrow specialists. Although we are theoreticians, we always work alongside designers and experimental personnel and are present at the plants during assembly."

Simonenko believes that a nuclear brain drain abroad is still rather a theoretical problem, but that it could it rapidly become more immediate.

After people have left the "prohibited area" their chances of ending up abroad increase drastically, my interlocutor said, because there are no real borders today. The main thing is to get out of Russia and, if you find yourself in the Ukraine, for instance, it costs nothing to get to Poland. Or further....

I asked Simonenko's colleagues a direct question: Would they leave if they received an invitation to work abroad?

"As far as I know, none of my friends has received that kind of offer," A. Antonov, engineer-designer Category

I, replied. "People have always been hand-picked [shtuchnyy otbor] for our institute, and as a result committed people with a sense of duty, so to speak, were gathered here. Before we took pride in doing crucial business for the state, and we were conscious of this from the fact that the standard of living in Chelyabinsk-70 was considerably higher than in other places. Now my salary is 838 rubles [R]. Other people's salaries are even lower. We are virtually becoming outcasts."

"Specialists have already begun to leave the institute. Right now they are going out into the 'big wide world.'" But, remember, it's all the same to us where designers and skilled workers go—whether they go abroad or to the neighboring city of Kasli," V. Nikitin, the institute's deputy director, said. "You don't get real specialists in our field straight from university; it takes 10-15 years of practical work. In the last year—this has never happened here before—more than 100 people left. Mainly [manual] workers at the moment. But even they, believe you me, were hand-picked people."

S. Gagarinov, chairman of the institute's trade union committee:

"At our request the cost of the minimum consumer basket in Chelyabinsk-70 was worked out: It turns out to be roughly R1,100-1,200 per month working on the basis of the prices for the first half of January."

How can these people be provided with at least a normal wage?

"There is a great deal of talk now about conversion," V. Simonenko opines. "But I would like to draw your attention to the fact that the conversion projects currently being discussed require far less intellectual effort from scientists than our previous work developing weapons. There are scientists here in Chelyabinsk-70 capable of solving global problems. So, it is necessary for them to replace one task with another, equally wide-ranging task...."

Conference on 'Brain Drain' Begins in Moscow

Main Speaker 'Pessimistic'

LD1702161392 Moscow TASS in English 1533 GMT
17 Feb 92

[By ITAR-TASS correspondent Veronika Romanenkova]

[Text] Moscow February 17 TASS—Brain drain from Russia and certain lowering of science and design potential are inevitable. This pessimistic forecast is made by academician Nikita Moiseyev, the main speaker at the conference: "Brain Drain in Present-Day Russia: Domestic and International Aspects".

The conference is attended by more than 100 specialists from Russia, Armenia, Ukraine, Belarus, Tajikistan, France, Germany. The aim of the conference is to work

out recommendations of the government that could prevent or at least lessen brain drain.

The state of Russian industry and economy do not warrant demand for new scientific projects in the years ahead. The state will be unable to afford the system of research collectives that has been formed, academician Moiseyev told ITAR-TASS.

He believes that various surveys ordered every year by international organisations could be carried out by Russian researchers prompter, cheaper, and with better quality than by researchers of other countries. Such projects include the assessment of acid rains, forecast of the ecological state of the polar basin, irrigation projects and many other things.

Fifty-One Percent 'Ready To Go'

*LD1902103692 Moscow TASS in English 1623 GMT
18 Feb 92*

[By TASS correspondent Veronika Romanenkova]

[Text] Moscow February 18 TASS—Fifty one percent of Moscow scientists-poll participants are ready to go abroad on a temporary contract, another six percent are ready to leave the country forever, an international conference was told here today.

The conference, with the theme "Brain Drain' in Modern Russia: Interior and Exterior Aspects", is underway in the Moscow region.

A state system of measures to reduce the acuteness of the brain drain problem and encourage Russian scientists working on foreign contracts to return home has not been elaborated, stressed conference participants.

In their opinion, the Russian intellectual resources should be of maximum use, for instance, Russian scientists should be involved in international research. The legislation also needs corrections: first and foremost, a law on intellectual property should be adopted and the ban on hard currency payments to Russian citizens working in their Republic should be lifted.

Conference To Draft Export-Control Legislation

*92WP0153A Moscow KOMMERSANT in English No 5,
3 Feb 92 p 4*

[By Grigoriy Streltsov: "Burbulis Gunning After Maverick Arms Dealers"]

[Text] With Western anxiety about Russian arms proliferation as a backdrop, Russian State Secretary Gennadiy Burbulis held a government conference on January 27 to draft legislation to regulate the arms trade. Despite Burbulis having appointed a team to write new laws, the West is moving forward with plans to have its own intelligence agencies monitor the export of Russian armaments.

The conference heard testimony that commercial structures were selling advanced weaponry technology to outlaw countries.

Chetek [expansion unknown] and the Konversia Exchange were mentioned as potential channels for strategic, including nuclear, technologies being taken out of the country. Details were given about a recent deal with Iran to sell spare parts of Soviet hardware captured from Iraq.

KOMMERSANT has learned from a source participating in the conference that 1,000 T-72 tanks are to be sold to Iran. Half will be delivered from Russia and Iran will manufacture the rest.

Military experts told the conference that deals with Iran may erode Russia's position as an exporter of weapons to the United Arab Emirates and Saudi Arabia. These arguments didn't sway arms producers.

Industry Minister Titkin, who is in charge of the defense complex, said, "I care nothing about geopolitics. My work-force is hungry and they aren't getting paid."

This attitude is likely to continue until the government steps in with laws that harness defense industry mavericks.

Until restraints are put on arms dealers, the West will continue to commit intelligence resources to the problem.

An informed source says the CIA and its counterpart in Germany will continue to aggressively monitor arms shipments to unstable countries from the former Soviet Union. The same source said the Israeli delegation to the Middle East Peace Conference in Moscow included two highly placed officials of the Mossad and Shin-Bed, who are monitoring the situation.

Uranium Still Being Mined, Produced, Sold

*LD1402115792 Moscow Russian Television Network
in Russian 2000 GMT 13 Feb 92*

[Video report by correspondent I. Shestakov, including remarks by V. Pirogov, deputy general director of Yuzhpolimetall enterprise, on uranium production—from the "Vesti" newscast]

[Text] [Video shows factory scenes, interior and exterior, throughout] Even though the last reactor that produced the filling for nuclear bombs has been stopped, uranium is still nevertheless being mined. The uranium industry is the only one that has proved impossible to split up during the division of the Union, simply because not a single republic—except perhaps Russia—is able to produce pure uranium unaided. The enterprises which take part in the production cycle are scattered throughout the country.

Total production costs run into thousands of millions of dollars. One of these chains starts in Kazakhstan, where

uranium ore is mined. Later it is sent on to the factories of Yuzhpolimetal in Kyrgyzstan, where the ore undergoes primary processing. [video shows factory nameplate: Southern Polymetallic Combine Production Association—hydrometallurgical works, then yellow powder in a machine and more being held by a worker] This powder is rightly known as product "Number One" among the workers. It is real uranium.

[Video shows correspondent interviewing worker] [Correspondent] How many bombs are made from your uranium?

[Worker, laughing] A lot.

[Shestakov] Now that missiles are no longer being produced the mining of uranium has been cut back sharply. It has been decided to sell the surplus to the West.

[Pirogov] We are selling to two countries so far—the United States and Britain.

[Shestakov] [video shows barrels in storage] The quantity of barrels horrifies the U.S. uranium-producing companies and their trade unions. The CIS [Commonwealth of Independent States] possesses nearly half of the world's reserves of uranium, and the price of unenriched Russian uranium on the market is just \$20. What is particularly important is the fact that the uranium industry is the only sector in the Union that never used to fall down on the mining plan. [Video shows sign: "Danger—testing]. The uranium on offer is of high quality and is produced by the most advanced technology. In this we really have outstripped the Americans. Now the Americans think that the Russians are driving down prices in the market and have complained to the international trade commission. If the commission acknowledges that the prices really are too low, then the European and U.S. market will be closed to our uranium. [video shows notice: "Forbidden zone"]

Debt Payment Via Warhead Sales Scenario Viewed

PM1402170192 Moscow KOMSOMOLSKAYA
PRAVDA in Russian 13 Feb 92 p 3

[Report by N. Danilov: "We Are Not So Rich As To Trade in Warheads"]

[Text] J. Attali, president of the European Bank of Reconstruction and Development, recently proposed what is truly the deal of the century: In exchange for Soviet nuclear warheads Western financial and foreign exchange centers would gradually write off the former USSR's external debt to the tune of \$60 billion. An option at first sight mutually beneficial. The West would have no cause to worry over the fate of our reduced nuclear weapons, and the states of the CIS [Commonwealth of Independent States] would finally be free of the noose of inherited debts round their necks.

This idea, unconventional according to all the canons of business and politics, has provoked many enthusiastic echoes in Moscow. KURANTY even noted that "trading in warheads is more profitable than in oil or timber." Is such a claim true? Doesn't it look like yet another manifestation of that habit, so typical of us, of replying to Western pragmatism with lumpen impatience and ecstatic expectation of manna from heaven?

Let me make clear right away that we are talking above all about the sale not of warheads, but of weapons-grade plutonium and uranium, which, as is well known, are the most important components of the warheads. Each warhead of a tactical nuclear missile contains up to seven kilograms of weapons-grade plutonium. The warheads of strategic nuclear weapons systems have two-three times more of this material. This means that the destruction of 1,000 nuclear warheads would liberate between seven and 20 tonnes of weapons-grade plutonium.

In the long term deep cuts in the nuclear arsenals of the United States and Russia are not ruled out. If we now possess roughly 27,000 nuclear warheads, more than 20,000 could be cut. Translating this into weapons-grade plutonium, at least 80-90 tonnes of this fissionable material would be withdrawn from the military sphere. According to data from the American Federation of Scientists, the total reserves of the United States and the former USSR amount to roughly 200 tonnes, that is, 100 tonnes on each side. These same nuclear powers have 500 tonnes of weapons-grade uranium each.

Now let us try to estimate the market value of the weapons-grade plutonium and uranium liberated in the reduction process. The task is extremely complex, since such materials have never before come onto the international market—at least not through legal channels. However, the Western press puts the value of a kilogram of enriched uranium at about \$100,000. Weapons-grade plutonium, according to estimates, is five-ten times more valuable.

Thus the value of a tonne of weapons-grade uranium would be \$100 million, while that of a tonne of weapons-grade plutonium would be between \$500 million and \$1 billion. Some regimes in the developing countries would perhaps give far more for these materials. But even on modest estimates, the value of 5,000-6,000 nuclear warheads of tactical nuclear weapons reduced in this way is equal to the sum of our external debt!

Let us go further, however. First of all it is important to specify the spheres of use of fissionable materials with the label "weapons-grade." It is perfectly possible for modern technology to convert the plutonium from warheads into another of its forms—energy production. This form of "nuclear fuel" differs from weapons-grade plutonium by its low level of enrichment and the presence of a whole "cluster" of isotopes. Given the appropriate processing, several dozen kilograms of excellent nuclear power station fuel can be obtained from one kilogram of weapons-grade plutonium.

Skeptics will say that possibilities of using plutonium in modern nuclear power engineering are extremely limited. For this, other, fairly expensive types of nuclear reactors are needed, and are being developed at the present time. A fair comment, if life were limited to the present day. But it is naive to suppose that nuclear power will remain for long in the form in which we know it. You can tell this from, if nothing else, the actions of the most farsighted states, for example Japan.

At the beginning of this year Japan embarked on the realization of the biggest "plutonium project" in history. Over a period of 30 years the Japanese intend to create plutonium reserves of 400 tonnes! Why? One of the latest reports from the Japanese Ministry of International Trade and Industry indicated that by 2010 Japan plans to double its production of electric power at nuclear power stations.

What provoked this major shift in Japan's energy policy? The desire of that country's leadership to safeguard its economy from shocks on the world oil market, and to lower its dependency on the import of power sources.

When the signs of the exhaustion of oil and coal deposits intensify, plutonium will become the most valuable energy-producing substance, its value comparable with that of gold! By selling off our plutonium now on the cheap, we would be in effect trading off the energy resources of the next millennium.

There is no reason to suppose that an experienced specialist like J. Attali comes forward with major initiatives without subjecting them to preliminary analysis. Probably, even the scenario involving writing off our debts in exchange for nuclear warheads was also thoroughly calculated. Judging by the fact that the idea was put forward by a highly-placed representative of Western business circles, the "game" with the CIS' external debt is certainly worth the candle. For the West. But for us?

'Centralized Super Storage' Facility Proposed

924P0066B Moscow MEGAPOLIS EKSPRESS
in Russian No 2, 9 Jan 92 p 22

[Article by Pavel Kolesnikov: "We Are Turning the Urals Into a Model Nuclear Storage Facility"]

[Text] The Soviet nuclear potential (both military and "peaceful") is now the focus of attention in the domestic and foreign press. Who will have the strategic missiles and tactical warheads located on the territories of the new sovereign states? Many people really fear that an exchange of missile strikes between the fraternal republics will lead to full-scale nuclear civil war that will destroy not only the new-born independent states but the entire planet. Or at least all of the northern hemisphere, thus resolving the North-South confrontation.

The influential democratic senator Sam Nunn (chairman of the Senate Armed Forces Committee) has summed up the situation as follows: "Either we achieve in the very

near future the greatest reduction of nuclear weapons in the history of mankind or there will be an unforeseeable proliferation of nuclear weapons, fissionable materials, and nuclear technologies. For even if the former Soviet republics do not engage in nuclear civil war they may start to sell surplus weapons and export nuclear technologies, while hungry engineers from defense plants take advantage of the emigration laws and set off to work in 'southern' countries, where nuclear weapons may soon be as commonplace as Kalashnikov automatics."

This threat has seemed so real to American legislators that both the Senate and the House of Representatives voted in late November to allocate \$400 million to help the USSR (Commonwealth of Independent States) to dismantle warheads. It is quite possible that this will be only a first installment. American taxpayers may soon become the main source for real funding for the Soviet defense industry, which is totally unprepared to assimilate the many billions of capital investments in disarmaments on the same scale and with the same efficiency as in earlier years, when money was allocated by the party and government for the arms race.

The deputy minister of atomic energy and industry, Viktor Mikhaylov, who is responsible for defense matters in the activity of the nuclear department, recently chaired a Soviet-American seminar in Kiev attended by many American nuclear (military) experts from Livermore and other laboratories, which substantiated a plan to use the American millions. It is being proposed that all \$400 million be used to build a centralized super storage facility in the Urals to store pure (weapons-grade) plutonium. (The exact location of the new construction site of the century is still secret so as not to scare the local population beforehand.)

The huge stock of plutonium produced by Soviet nuclear power workers is truly dangerous: This element is radioactive and it could be seized by criminals for the purpose of blackmail, and—the most important thing—it is extremely toxic. Most weapons-grade plutonium is "installed" in warheads and is held by the military. If mass dismantling of warheads really does start in the near future (with the tactical warheads first), then the plutonium will again be in the hands of those who at one time produced it, receiving orders and awards and titles for so doing. The problem of reliable storage (for millions of years while it is still decaying) or controlled use (fast-neutron reactors, power elements on deep space stations, and so forth) must somehow be resolved.

The dense cloud of secrecy that covers all details of the Soviet nuclear program, however, does not make it possible to judge with any degree of certainty which disarmament programs will be the best. Is it necessary to build a new centralized super storage facility at a new site or re-equip facilities already existing for this purpose more cheaply and more simply (including Arzamas-16, for example)? The Ministry of Atomic Energy and Industry has already set up the well-known Atomash in the Don steppe, but the incomplete complex, to which it

was necessary to ship a stream of material from nuclear reactors, has been sinking into the ground in the literal sense of the word.

Moreover, the Soviet defense industry has already put forward an alternative project to eliminate both nuclear and chemical weapons by means of underground nuclear explosions. They say that all that is necessary to blow them up. However, the desire of any normal expert to ensure the future of his own profession is quite understandable and since there are no other experts, society must listen to those who are there, and as a result nuclear disarmament will inevitably require a further buildup in the nuclear industry. For apart from the weapons themselves, which fortunately are not too radioactive, there is still the unresolved problem of radioactive waste from the nuclear industry, nuclear power engineering, and the reactors aboard nuclear-powered submarines. Whereas production of weapons-grade plutonium has now virtually ceased for all practical purposes, it is not possible to close down the nuclear power stations [AES].

Under conditions in which the recovery of energy resources is falling and their delivery to consumers is becoming increasingly unreliable for economic and political reasons, nuclear power engineering remains the only reliable source of energy in many of the "independent" regions. Lithuania cannot abandon the Ignalinskaya AES, and Ukraine will probably be forced to continue operation of the Chernobyl AES, while in Armenia they are seriously thinking about restarting the Armyanskaya AES.

However, the new independent states are incapable of independently using (or even independently eliminating) nuclear facilities inherited as a legacy from the USSR. Of the 15 independent states, only Russia is a real nuclear power. The rest are more like nuclear hostages. Only Ukraine could in principle achieve nuclear status, and even that would be in the quite distant future (if an appropriate program were adopted and monstrous sums of money were spent); nuclear status assumes totally independent production (and testing) of nuclear weapons and means to deliver them. This, however, would be at variance with its pledges under the terms of the recent agreement on joint measures with respect to nuclear weapons.

Those weapons that are now located in the republics can be removed at any moment (evacuation of tactical weapons has already started). Strategic weapons systems, which it is difficult to remove (ICBM's in silos), cannot be used in interrepublic conflicts because they are targeted on the NATO countries (first and foremost the United States). Although it is theoretically possible to change the targeting, it is in principle impossible to reduce their range down to tactical ranges.

No uncontrolled proliferation of nuclear weapons is taking place; it is simply that instead of the USSR as a nuclear superpower, Russia has emerged as a superpower. Civil (interrepublic) nuclear war (a "nuclear

Yugoslavia") seems most improbable under these conditions. Moreover, the dependence of nuclear power engineering facilities and the nuclear industry on centralized supplies ties the independent republics even more firmly to Russia (they cannot count on help from the West because the Soviet reactors are unique). And this dependence will not disappear in the foreseeable future. It is necessary to think that an interrepublic atomic department will be set up (essentially it already exists) that will establish reliable centralized control over all nuclear facilities on the territory of the former USSR, and also over exports of nuclear technologies to third countries. This kind of control agency may turn out to be even more important than a joint command for strategic forces.

For 45 years nuclear weapons maintained the peace in Europe, preventing the cold war from becoming a hot war. The Soviet tank armies did not move to the Rhine, and the West did not intervene in 1956 in Hungary, nor in 1968 in Czechoslovakia. It is quite possible that now, within the Commonwealth of Independent States [CIS] nuclear weapons (or, more exactly, the threat of their use) may also help to dampen (if not prevent) quite probable interrepublic armed conflicts. True, in Europe there was a nuclear balance, while in the CIS, Russia dominates in the nuclear field, but this kind of structure may also be stable enough.

Warheads' Relocation to Perm Questioned

*LD1902004392 Moscow POSTFACTUM in English
1526 GMT 18 Feb 92*

[From the "Politics" section]

[Text] Perm—Regional administration refuted rumors concerning re-dislocation of nuclear warheads to a missile base near Perm from the territories of Ukraine and Belarus. This fact was featured by KOMSOMOLSKAYA PRAVDA on February 8 issue with reference to a senior officer of a missile Army unit near Bershet village, who wished to remain anonymous, and later, on February 11 and 12, by the PERM ZVEZDA newspaper. Perm journalist Oleg Andriyashkin, author of the information in KOMSOMOLSKAYA PRAVDA, told POSTFACTUM that despite refutations, he is certain in his informer's reliability who allegedly saw for himself tractors carrying warheads in the ammunition storage zone of the Army unit.

The Bershet garrison is situated 25 km southward of Perm. According to the Western military experts, multi-charge systems RS-22, possessing 10 warheads with 550 kilotons capacity each and capable of hitting the target at a 10,000 km distance, are located here.

On February 17, Major-General Yuriy Kirillov, Bershet garrison's head, told journalists that of late nuclear warheads had been neither brought into nor taken out of the base. Right upon publication regional administration heads were allowed into Bershet who, according to

Kirillov, had a possibility to see everything for themselves. Vyacheslav Igumnov, first deputy regional administration head, warned journalists that in case of publishing unverified data to the point in the future, the administration is ready in keeping with the law on the press to demand identification of information sources from the authors. General Kirillov also added that the command of the base expects the arrival of the NATO inspectors. The inspection terms have not been determined so far. Journalists are not likely to unconditionally accept the refutations, noting that the military will always deny everything. Nevertheless, an officer of a special department of a Perm division, who asked not to name him, told POSTFACTUM that special departments in the Army units were not operating of late in guaranteeing security of transporting of any military cargoes, which is always the case while transporting nuclear weapons.

Illegal Nuclear Shipments Originated in USSR

MK1202130592 Moscow MOSKOVSKIYE NOVOSTI in Russian 16 Feb 92 p 13

["Scandal" report by Aleksey Khazov: "Nuclear Alarm in Rome. Not Only Baghdad and Tripoli, but Mafia Terrorists From Any Country in the World Could Now Own Nuclear Components From the Former USSR"]

[Text] Immediately after the August putsch, when anonymous well-wishers from Budapest briefed Interpol about "strange movements of military materials from the USSR to Europe," the Italians did not at first attach particular importance to this. But when a month later their special services received a confidential report on this from Aldo Anghessa, it became clear that something serious and unusual was in fact going on.

Anghessa—a dealer well-versed in shady deals as a middleman with the Third World—has long been well-known to Rome's special services, and to other people as well. The height of his renown came in 1987 when he informed the Italian authorities with supreme accuracy that a Libyan ship docking at a local port had taken on board a sizable consignment of weapons and drugs. Since then there seems to have been no reason not to trust Anghessa....

What did such an important "source" report this time? The fact that he had come across two international mafia couriers who told him in alarm that "they had gotten mixed up in a deal" involving not just the shipment of weapons or heroin, but the buying and selling of... nuclear materials from the moribund USSR.

Anghessa's information was confirmed again. It was confirmed by geiger counters that went wild when a Swiss called Karl Friedrich Federer was searched in his hotel in the town of Como in northern Italy. The financial police found a minute tablet among his things containing 0.2mg of plutonium. Skilled experts produced their findings: The tablet is used to set [otladka]

gauges during work with fissionable materials. "Tekhsnabeksport" was the underground supplier. Its address is 32/34, Smolenskaya-Sennaya, Moscow.

A month later the Swiss police seized in Zurich a consignment of uranium-235—roughly 30 kg in total, allegedly from the Congo. But further investigation showed that the trail led to Irkutsk.

Another month went by and there came another discovery. This time in Milan. Four "couriers" were arrested there at once, three of them Hungarian (!). Their baggage contained two kg of red mercury, a radioactive material used in the Soviet nuclear industry as a good heat conductor.

All these things are extremely alarming to the Italian authorities. "We are no angels, of course," MOSKOVSKIYE NOVOSTI's correspondent was told by a man with close links with higher-ups in the local military-industrial complex. "We have sold weapons to Libya and Iraq, in the late-1970's; moreover, we supplied Baghdad with a whole radiological laboratory with equipment to yield plutonium as well as, according to some data, a heavy-water reactor, also for producing plutonium." But in that case it was largely a matter of "controlled" operations. Now the breakup of the former USSR's military production and the absence of customs and other forms of control are, we are convinced, bringing about underground deals involving international mafia organizations. That means that dangerous nuclear components could even fall into the hands of those people for whom they were not originally destined.

Citizens Polled on Relocating Nuclear Weapons

OW1702075692 Moscow INTERFAX in English 0655 GMT 17 Feb 92

["Viewpoint"; transmitted via KYODO]

[Text] The National Public Opinion Studies Center asked in January 1597 people in Russia, 517 in Ukraine and 240 in Kazakhstan to express their attitude to the idea that all former Soviet Union's nuclear weapons should be concentrated in Russia.

Russian respondents showed the most enthusiastic support for the option: 43% said the relocation would serve best the national interests.

This opinion was shared by 21% of the respondents in Kazakhstan and 19% in Ukraine.

14% of the Russians supported the idea because they believed this would help Russia keep its status of a great power.

39% of the respondents in Ukraine, 30% in Kazakhstan and 4% in Russia were opposed to concentrating all nuclear weapons in Russia because, they said, this would give Russia an undue advantage over other CIS [Commonwealth of Independent States] countries.

15% of the respondents in Russia, 8% in Ukraine and 6% in Kazakhstan said the relocation would do a lot of harm to Russian security.

New Initiative Program Cancels Projects

*OW1902221692 Moscow INTERFAX in English
1848 GMT 19 Feb 92*

[From the 20 February "Business Report"; transmitted via KYODO]

[Text] In accordance with a new program for reducing strategic nuclear forces, Russia's military-industrial complex will cancel most projects for developing new strategic nuclear weapon systems and modernizing old ones. Russia will continue to develop only two missile systems in 1992-93: the SS-18 Satan heavy strategic carrier and the new SS-25 Sickle long-range mobile missile. Businesses and scientific research centers in the Russian military-industrial complex will have to stop work on the new SS-X-26 missile and the modernized AS-17 air-based cruise missile.

The SS-18 strategic intercontinental missile, which was first added to the Soviet military arsenal in the late 1960's, is still the cornerstone of the former USSR's nuclear military forces. The SS-18 is capable of carrying up to 10 separately-targeted military warheads (based on the MIRV [multiple independently targeted reentry vehicle] system), each having 100-300 kiloton potential. Information provided by specialists from the military-industrial complex reveals that this missile system must undergo thorough modernization, including the development of new launch mounts, engine modifications to reduce delivery time, and modernized electronic components for the targeting system. A new ABM [anti-ballistic missile] hardened warhead will also be developed. Experts feel that the project could take ten years and 18-25 billion rubles (at 1992 value) to complete.

The SS-25 missile system, analogous to the U.S. Midgeman, was developed in the mid-1970's. The Soviet system is noted for the fact that it is completely ready for mass production, while in 1990 the American system was still in the testing stages. The SS-25 system has hardened monoblock warheads based on trucks and railroad cars. Project developers project production of 200-300 SS-25's at the "Energy" military factories and perhaps at the Votkinsk factory, which used to produce SS-20's. Total cost for development and production of the navigation components was not disclosed.

Liquidation of Poisonous Substances Cited

*OW1402155392 Moscow INTERFAX in English
1417 GMT 14 Feb 92*

[Report by Mikhail Mayorov, Igor Porshnev, and others from "Diplomatic Panorama"—transmitted via KYODO]

[Text] Forty thousand tons of poisonous substances are stockpiled on Russian soil. Together with the weight of the ammunition Russia's chemical arsenal, the world's biggest, makes up some 400 thousand tons [as received]. DP's [Diplomatic Panorama] correspondent learned this from Grigoriy Berdennikov, a leading disarmament expert in Russia's Foreign Ministry.

According to him, the Disarmament Conference in progress in Geneva has already drafted a more than 200-page convention on banning chemical weapons. The talks involve spokesmen for 39 countries who take decisions by consensus, and about as many observers from other countries. G. Berdennikov believes that the convention might be signed as early as this year, as the Russian President B. Yeltsin said in his message read to participants in the conference recently.

The convention aims to destroy all chemical weapons and prohibit their development and production, the expert pointed out. Much will depend on whether the efforts to make the document universal and mandatory to all countries without exception (including Iraq) prove to be successful or not. Russia whose territory harbours all chemical arms of the former USSR is working out a program for their destruction.

This involves highly toxic and dangerous chemicals which creates certain difficulties in the process of destruction. In the first place, the process of liquidating poisonous substances should be ecologically safe. "Russia," G. Berdennikov said, "is open to cooperation in this area with other countries, such as the U.S., with which it began consultations long ago".

Since the public in the city of Chapayevsk opposed the plans to use a local plant for destroying chemical arms, the main problem to be resolved now is the choice of another site. According to the Russian Foreign Ministry expert, the process of destroying poisonous substances will begin at one site or another only when the consent of the local public and authorities is obtained.

Intergovernmental Chemical Arms Pact Viewed

*PM1002110592 Moscow KRASNAYA ZVEZDA
in Russian 5 Feb 92 p 2*

[“One-Line Telegrams” ITAR-TASS report: “Who Will Destroy Chemical Weapons?”]

[Text] “In pursuing a course of banning and destroying chemical weapons, the Russian Federation will inevitably come up against considerable difficulties inherited from the former Union,” Colonel General Stanislav Petrov, chief of the Commonwealth of Independent States Armed Forces Chemical Troops, believes. A draft state program for destroying chemical weapons was formulated two years ago. However, since then no specific decisions have been made. The draft needs to be more precise and it needs to be amended. In his view, it would be more logical to sign an agreement at intergovernmental level on sharing the material and financial losses associated with the destruction of chemical weapons.

GERMANY

Genscher Urges Chemical Weapons Convention*LD2002115492 Berlin ADN in German 1050 GMT
20 Feb 92*

[Text] Geneva (ADN)—According to Foreign Minister Hans-Dietrich Genscher, the Geneva Disarmament Conference must conclude a convention on the worldwide prohibition of chemical weapons this year. Genscher told the conference on Thursday [20 February] that this is the body's central task. The ban on using chemical weapons, defied again and again, has proved inadequate, he said. "Only a clear ban on any dealings with chemical weapons—that is to say including their manufacture, acquisition, and possession—can free us finally from this scourge of humanity," Genscher said.

A chemical weapons convention, however, can bring this about only if the large majority of states sign it and if there is confidence in the effective verification of the agreed prohibitions. "Only the verifiable nature of the commitments entered into creates confidence, and only confidence creates security," Genscher said. Negotiations on the verification system have made much progress already, and everything points to the possibility of consensus, he said. Inspections in the chemical industry also are indispensable, he added, in order to act as a deterrent against the misuse of the civilian chemical industry for weapons production.

Genscher welcomed the declaration by Russian President Boris Yeltsin to the effect that Russia has assumed responsibility for the destruction of all former Soviet chemical weapons stocks. Eliminating these weapons on schedule is of particular significance, he said, but Moscow must receive support in solving the problems connected with the storage, containment, and destruction of these weapons, he added. Genscher gave the assurance that Germany is ready to do this.

He also spoke in favor of the immediate abolition of all tactical nuclear weapons, saying they had become an "anachronism." In Genscher's opinion, the UN Security Council should impose extraordinarily severe sanctions to prevent nuclear weapons proliferation. States that try to acquire the means to produce nuclear weapons or other weapons of mass destruction, in violation of international law, must be isolated, he said.

Genscher Seeks End to Weapons Technology Spread*LD1802155592 Berlin ADN in German 1354 GMT
18 Feb 92*

[Text] Bonn (ADN)—Foreign Minister Hans-Dietrich Genscher has reiterated his call for strict measures against the proliferation of the technology of weapons of mass destruction. That must be top priority on the agenda of the UN Security Council, Genscher told the Free Democratic Party's Bundestag Group in Bonn

today with regard to the German-Russian-U.S. initiative for the establishment of a center for science and technology against the potential proliferation of the technology of weapons of mass destruction.

The foreign minister recalled that he had called on the members of the UN Security Council on 17 January to stop further proliferation now. That appeal received widespread agreement, as the position of the EC in Lisbon on Monday demonstrated. According to Genscher, even Japan "has meanwhile given its support." The foreign minister said the most important demands of the German initiative are the punishable registration of its own citizens' participation in the production of weapons of mass destruction abroad, international isolation by the Security Council of countries that acquire technology of mass destruction, and the continued disarmament of strategic nuclear weapons, nuclear short-range weapons, and the final destruction of chemical weapons.

Genscher Seeks Measures for Weapons Proliferation*LD1802155592 Berlin ADN in German 1354 GMT
18 Feb 92*

[Text] Bonn (ADN)—Foreign Minister Hans-Dietrich Genscher has reiterated his call for strict measures against the proliferation of weapons of mass destruction technology. This must be top priority on the agenda of the UN Security Council, Genscher told the Free Democratic Party's Bundestag group in Bonn today regarding the German-Russian-U.S. initiative for the establishment of a center for science and technology against the potential proliferation of weapons of mass destruction technology.

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Issues Involved in Using Plutonium Rods Discussed*AU1102183392 Hamburg DER SPIEGEL in German
10 Feb 92 pp 43-45*

[Unattributed report: "Thoughtless Game"]

[Text] Claus Berke, president of the German Nuclear Forum, has good advice for the military in the former Soviet Union: If they do not know what to do with their superfluous warheads, they should not hesitate to ask the Germans.

During a recent meeting of his organization in Bonn, the nuclear power lobbyist boasted that "we Germans" have "20 years of experience." That is how long his colleagues, the nuclear experts, have been dealing with the elimination of the nuclear substance plutonium.

It is true: In the nuclear plants at Hanau, engineers have processed further the extremely hazardous substance on an industrial basis: It is processed into the so-called mixed oxide fuel elements (MOX), which are used as fuel in nuclear plants.

However, western German nuclear experts have been highly irritated by Berke's offer "to solve the plutonium problem." Even Berke's colleagues recently warned that the praised plutonium treatment in Germany bears safety risks that have so far been ignored.

Lothar Hahn, a nuclear expert at the Darmstadt Ecology Institute, stated that the use of MOX elements in nuclear power plants, generally considered harmless and practiced for years, is "a thoughtless game with reactor safety." This criticism has now been substantiated by experts of the otherwise rather nuclear-friendly Cologne-based "Society for Reactor Safety" [Gesellschaft fuer Reaktorsicherheit, GRS].

According to a study conducted by GRS expert Wolfgang Thomas, under unfavorable conditions the fuel rods that contain plutonium may impede the functioning of the reactor control and the emergency system. In the worst case, the sensitive rods may even burst.

The GRS experts do not only question plutonium processing in Hanau, currently a matter of controversy between Joschka Fischer (of the Greens), the Hesse environment minister, and his colleague of Bonn, Klaus Toepfer (of the Christian Democratic Union). The availability of MOX elements is indispensable for the nuclear energy strategy of western German electricity suppliers.

Currently, 10 nuclear power plants in the FRG burn rods containing the plutonium-uranium mix. The MOX fuel for the Biblis-type reactors (pressurized water reactors) consists of about 97 percent uranium oxide and 3 percent plutonium oxide. More than 50,000 such fuel elements have been produced so far by the Siemens fuel rod plant in Hanau.

As the highly-radioactive plutonium is a waste product from reactors operation with conventional uranium fuel substances, the German nuclear industry developed the reactor recycling method in order, as it says, to "get rid" of the bomb material "without doing any damage." The 21 western German nuclear power plants transform an average five tonnes of uranium fuel to plutonium each year.

In a complex chemical process, the radioactive poisonous substance is separated from the used German uranium fuel elements in the French and British reprocessing plants of La Hague and Sellafield, and sent back. The nuclear reactors, which originally produced plutonium from uranium, now must burn the residues that are packed in MOX elements.

Nuclear critics have long since regarded the procedure, incorrectly praised as "fuel cycle," as dangerous madness.

Ecological expert Hahn estimates that MOX fuel elements, because of reprocessing costs, plutonium transport, and processing are about 12 times as expensive as conventional fuel rods on the basis of uranium. This means that the uranium-plutonium rods are worth each of their single kilogram of weight in gold.

The "enormous amounts" of plutonium dioxide, processed by the nuclear industry in countries like the Federal Republic, provoke a "virtually nightmarish weapons risk," U.S. energy expert Harold Feiveson of Princeton University has warned. Still in this decade, Feiveson said, the civilian nuclear industry will have more plutonium than the amount contained in all nuclear arms of the world: Feiveson added that plutonium dioxide can "immediately be used as material for bombs."

Thomas said that reactors cannot cope with the "problem of the disposal of plutonium." The "final disposal of plutonium" can be managed only in "the form of direct final storage" of fuel rods.

According to the GRS study, MOX technology is not only nonsense but even careless. The Thomas report proves that the western German nuclear industry has been handling the dangerous fuel rods for more than 10 years without ever having carefully examined the risks to reactors and the environment.

As radiation of the plutonium fuel rods is much more aggressive in the reactor ("spectrum induration") and as fuel rods remain longer in the reactor ("higher burn-up") than uranium elements, the wear and tear of the nuclear fuels and fuel elements material increases (Thomas)—with dangerous consequences:

- "Outside corrosion" of the metal jacket tubes of the fuel elements increases; it means that the protective tubes, which are approximately as thick as a human thumb and are designed to hermetically screen off the fuel from the cooling water, rot faster than those used for conventional uranium elements.

- The "mounting internal pressure" in the MOX elements is so strong that under certain conditions there is the threat of a "release of cracked gas;" the jacket tubes might burst under the pressure of the gas, and their highly radioactive contents might pollute the cooling water.

—The MOX fuel elements impede the efficiency of the control rods for the nuclear fire in the reactor; in an emergency this may threaten “the safe switch-off of the reactor.”

— “In the event of defects or incidents” the increased heat (“post-integration energy”) of the plutonium-containing fuel rods reduces the time of the reactor crew by decisive seconds to take “steps to limit the danger of an incident.”

— If parts of the nuclear inventory of a reactor equipped with MOX elements melt, there is the danger of the greatest conceivable incident, even after a successful emergency cooling—a scenario for a disaster that has not yet been examined in the analysis of nuclear melt-downs.

Even the question how the MOX rods can be safely transported and stored once they have been used in the reactor creates major problems to the nuclear lobby. Because of “pervasive neutron radiation” (Thomas) it has so far not been possible to develop a sufficiently safe transport container.

Parties Favor Stricter Arms Export Controls

Coalition Debates

AU1402104492 Cologne Deutschlandfunk Network
in German 1000 GMT 14 Feb 92

[Text] Representatives of all political parties in the Bundestag have advocated tighter arms export controls to prevent military conflicts.

North Rhine-Westphalian CDU [Christian Democratic Union] deputy Karl Lamers stressed that arms control policy today must above all prevent the use of nuclear weapons in possible conflicts between the republics of the Commonwealth of Independent States [CIS] in the former Soviet Union. SPD [Social Democratic Party of Germany] deputy Guenter Verheugen said that the existing security risk results from the proliferation of weapons of mass destruction and should have been prevented in the past. Minister of State in the Foreign Ministry Helmut Schaefer, FDP [Free Democratic Party], advocated a cooperative strategy of conflict prevention. He said that the CIS republics should take over the obligations defined in the CSCE treaty and should ratify that agreement.

The Bundestag debate on the state of international disarmament and arms control negotiations was called by the CDU/CSU [Christian Democratic Union/Christian Social Union] and FDP coalition. Their motion emphasizes the disarmament efforts made by U.S. President George Bush and former Soviet chief of state Mikhail Gorbachev.

Support Tactical Nuclear Ban

LD1402112392 Hamburg DPA in German 1030 GMT
14 Feb 92

[Excerpt] Bonn (DPA)—The party groups in the Bundestag gave their unanimous support today to the Federal Government's call for a global abolition of tactical nuclear weapons. In a debate on disarmament, which centered upon the dangers of the disintegration of nuclear protection in the 11 republics of the Commonwealth of Independent States [CIS], members from all groups pushed for the prevention of the further proliferation of nuclear science and weapons by unemployed nuclear experts. Friedbert Pflueger (Christian Democratic Union) proposed the creation of nuclear dumps in Siberia, the re-employment of those affected (presumably by the closure of nuclear research facilities) in making nuclear power plants safe, and the dispatch of staff for active participation in the work of the UN atomic supervision authority (IAEO) in Vienna.

Helmut Schaefer, minister of state in the Foreign Ministry, stressed the topicality and urgency of ratification of the agreement on conventional disarmament by the CIS republics. He announced the conclusion by the end of this year of the Geneva Convention on the worldwide prohibition of all chemical weapons, which has been the subject of controversy for years. Like Olaf Feldmann (Free Democratic Party), Schaefer also questions the necessity of “missiles in our immediate neighbor states”. That addresses the issue of the Hades French short-range missile. [passage omitted]

NVA Reportedly Trained Iraqis in Nuclear Combat

AU1702130592 Hamburg WELT AM SONNTAG
in German 16 Feb 92 p 2

["MJI" report: "NVA [National People's Army] Trained Iraqi Soldiers"]

[Text] Hamburg—Iraqi Army soldiers were trained in nuclear and chemical combat by the former GDR National People's Army [NVA].

That was revealed by an internal protocol that was made available to WELT AM SONNTAG. According to the former commander of the “chemical services” exercise site in Storkow (Brandenburg), it was drawn up by the FRG Defense Ministry shortly after unification.

According to the protocol, during the period of 20 August to 11 September 1979, obsolete military materiel was brought into contact with nuclear or chemical substances on the Storkow exercise site so as to make training as realistic as possible. According to the ex-NVA officer, both stationary “radiation sources” of basic nuclear substances with 1,000 to 2,000 curies of radioactivity and mobile facilities with 400 curies of radioactivity were used. The nuclear and chemical substances

were washed off the military equipment during decontamination exercises, collected in basins, and subsequently sprayed over the terrain.

The Iraqi military was so pleased with the NVA facility that complete sections of the exercise site were copied near Baghdad with the help of East German military officers.

Moellemann Discusses Relations With Iran

AU2202190192 Hamburg *DIE ZEIT* in German
21 Feb 92 p 28

[Interview with Economics Minister Juergen Moellemann by Wolfgang Hoffmann; place and date not given: "We Do Not Deliver Weapons"]

[Excerpt] [passage omitted] [Hoffmann] When you were in Tehran, you were told about a number of wishes for industrial cooperation. Specifically, a chemical factory for plant protection substances was mentioned but also the further construction of the nuclear power plant that has been started with German help and is almost finished. Tehran said that it is willing to sign a corresponding agreement renouncing the production of nuclear, biological, and chemical weapons. Were these just empty words or has something concrete happened?

[Moellemann] Something has happened concerning both issues. First, when I was in Tehran I stated that approval for the delivery of parts for the construction of the reactor in Bushir is out of the question. I also told the president this definitely. Second, I stated that there are great reservations concerning the planned chemical facility in Gadwin and that in this respect we coordinate our actions with our partners in the so-called Australian Group, which supervises the transfer of chemical facilities. This process of coordination has been concluded. Iran has been told that parts delivery for this factory is out of the question, too. Both decisions have been conveyed in a binding form.

[Hoffmann] Has there been a signal concerning the renunciation of weapons production?

[Moellemann] Last summer Iran announced that it would be ready to subordinate itself to the control mechanisms of the corresponding Geneva Convention on the production of chemical weapons. We were not satisfied with that. [passage omitted]

ITALY

Clandestine Nuclear Exports From CIS Viewed

92WP0149A Rome *L'ESPRESSO* in Italian 16 Feb 92
pp 42-43

[Article by Chiara Beria di Argentine and Leo Sisti: "A Bomb Is Roaming Around Europe"—first paragraph is *L'ESPRESSO* introduction]

[Text] The Como connection. First, plutonium, uranium, and red mercury were seized. Now four couriers from the East have been arrested. Behind all this emerges the most terrifying traffic born from the ruins of the USSR.

A luxurious Mercedes with Hungarian license plates had left Budapest bound for Milan. A quiet trip. But at 1525 on Wednesday, 8 January, the car and its four occupants stopped near the Capitol Hotel. And there sprang the trap laid by the Finance Guards who, upon a mandate issued by Romano Dolce, deputy attorney general of Como, arrested the four smugglers from the East.

Thus opened the latest chapter in the sensational hunt that is on all over Europe to intercept the clandestine export of Soviet nuclear materials. On 15 October a plutonium plate was seized in Como. On 11 November 29 and one-half kg of uranium were discovered in Zurich and led to the arrest of Raphael Huber, a high canton officer charged with corruption. And finally, there was the operation conducted by the anticrime department of Swedish Customs who, acting upon a report from the Norwegian police, were able to discover a contract for the supply of "red mercury" in the house of Janos Sarossy, a vodka smuggler of Hungarian origin who is now on the run.

But let us get back to Milan and the loot from the Capitol Hotel. More than 600 million lire in cash and checks were confiscated, plus several documents, and two kg of red mercury (a mixture of mercury and nonradioactive antimony that is good conductor of heat). And another surprise: some scandium, a very rare and costly light metal that according to the experts can also be used in missile technology.

Who are the four mysterious couriers now under heavy guard in jail? Three of them are Hungarian: Sandor Bekefalvi, employed in an import-export firm in Nyirbogat; Robert Kiraly from Oroshaza; and Josef Nagy from Vasarosnameny, a town located 50 km from the Ukraine border. As for the fourth character, Dezider Ostrogonac, he is a 48-year-old electronics engineer residing in Vienna. According to the Austrian authorities, he is employed by Meletit Universum, a trade agency with locations in Vienna, Hungary, and Czechoslovakia.

Four men who came out of nowhere. But their apprehension, which has interested various countries' secret services, gives a first glimpse at the most agonizing scenario of the last few months. The disintegration of the Soviet empire could cause the dismemberment of its military industrial complex and a deadly form of nuclear proliferation. According to CIA director Robert Gates, there are 30,000 nuclear warheads, and from 15,000 to 18,000 nuclear tactical weapons scattered over a very vast territory.

Furthermore, in Russia there are 10 atomic cities with code names like Tomsk-2 and Arzamas-16 with a total of almost 800,000 inhabitants. These are nuclear specialists

and their families, now facing disbanding and famine; and their brains are for sale to the highest bidder. Speaking in Washington on 5 February, Alireza Jafarzade, a spokesman for the people's mujaheddin who oppose the Iranian regime, warned that refugee scientists from the USSR are already at work at five secret Iranian bases (Gurgan, Moallem Kelaieh, Karaj, Darkovin, and Isfahan). Vyacheslav Rozanov, deputy director of the Kurchatov Institute for Atomic Energy in Moscow, also admitted that two of their scientists have had job offers from Libya, at \$2,000 a month.

How is this traffic carried out, and along which routes? International investigations have discovered that the red mercury is produced in laboratories in Kiev, at Tblisi in Georgia, and at Uzgorod in the Ukraine, the last situated only 15 km from the Hungarian border. Then the materials are apparently stored in the warehouses of trade firms like Elektromodul, whose headquarters are in Budapest. Red mercury (which in the formulas known as 20/16 to 20/20 is not radioactive, whereas in the formulas known as 20/23 and 20/27 it is radioactive) is used in the manufacture of neutron bombs. Hidden in trucks for the international transport of wood or vodka bottles, it might end up in some Western European ports like Malmo in Sweden, or Trieste. From there, it is shipped to Muslim countries (primarily Iran), as well as South Africa, Israel, Argentina, India, and Pakistan.

Apparently, arms also travel along these same routes, often handled by the same dealers' network. It is like a supermarket where anything is for sale, from gas masks to Kalashnikov rifles of Czech manufacture, MiG-21 planes, and Soviet-made missiles. The depots created by the Warsaw Pact in the former satellites of the USSR, especially Czechoslovakia, are the true sources of supply.

It appears that the most important of such arsenals is located in an abandoned mine 12 km from Slusovice. This is an incredible town, which for years has been an oasis of riches amidst the poverty of Moravia, and is controlled by a firm headed by Frantisek Cuba, founder and president of the JZD Agrokombinat Slusovice.

Former KGB agents operate in these virtually free-trade zones. They use diplomatic passports and immunities, and through mediators (the names that recur most frequently are those of Aleksander Kuzin and a Russian Jew named Kitzow, both working from Vienna, and a certain Lindberg, who supposedly is in charge of shipments toward Finland and Sweden) are allegedly able to supply any material in less than a week. A paper confiscated in Sweden and Italy lists the steps of a deal, with payment due only after a sample of the product has been duly analyzed. But the most disconcerting aspect is that often the documents refer to Soviet Government channels and to diplomats. And, as time goes on, the suspicion that a lot about this clandestine traffic is known in the ministerial palaces of Moscow becomes more and more real. It has already been proven that Viktor Mikhailov, the man who controls the nuclear apparatus from the Ministry for Nuclear Industry and Energy, has

encouraged, in the last few months, the sale abroad of nuclear technologies for peaceful uses. Another fascinating theory is making the rounds of the Western security services. It could be that the Eastern scientists themselves are orchestrating these strange findings to raise alarm in the Western countries and thus increase the price for their brains.

NETHERLANDS

Government Denies Export Licenses to Taiwan

Submarines and Radar Equipment

*LD1302124792 Hilversum Radio Netherlands
in English 1130 GMT 12 Feb 92*

[Text] Reports from Dutch political circles say that the Dutch Government will not issue licenses for exporting strategic materials to Taiwan. The Cabinet is said to be unwilling to risk a diplomatic row with the People's Republic of China. It is expected that the decision will be formally announced on Friday [14 February].

It will mean that the Dutch industries, such as the Rotterdam Dry Dock Company and the electronics manufacturer Hollandse Signaal, will be denied billions of dollars worth of orders for submarines and radar equipment.

Dutch Foreign Minister Hans van den Broek has already told the lower chamber of parliament that Holland's loyalty to China ought to be rewarded by Beijing, possibly in the form of more intensive economic cooperation.

PRC Negotiates for Aircraft

*LD1302153892 Hilversum Radio Netherlands
in English 1130 GMT 13 Feb 92*

[Text] Reports from Dutch diplomatic circles say Dutch aircraft manufacturer Fokker is negotiating with China on the sale of five to seven F-100 airliners, but the reports have been denied by the company itself. Fokker says it has had little contact with the People's Republic since six months ago, when Beijing signed an agreement on a joint venture with the U.S. aircraft construction company McDonnell Douglas for the production of a plane almost identical to the Fokker F-100.

However, sources close to the Dutch aircraft manufacturing and banking industry say that a Fokker official went to China only last December. These sources believe that by ordering a small number of Dutch-built aircraft, China is pressuring the government in The Hague to reconsider selling any further submarines to Taiwan.

It is expected that the Dutch Government will decide on Friday [14 February] not to issue licenses for the export of submarines and radar equipment to Taiwan in order to avoid a diplomatic row with China.

PRC Official Reaction

*LD1402122492 Hilversum Radio Netherlands
in English 1130 GMT 14 Feb 92*

[Text] China has informed the Dutch Foreign Ministry that it will regard any supply of military equipment to Taiwan via France as a conflict with Holland's 1984 commitment not to provide Taiwan with any military equipment or technology.

The Dutch electronics firm Hollandse Signaal is in the market to supply radar equipment for frigates that France is building for Taiwan.

China has not objected to the frigates' delivery.

Earlier, China warned the Netherlands not to deliver submarines to Taiwan.

Meanwhile, the leading Dutch Trade Union Federation has stressed the importance of the Taiwan order for the survival of the naval construction branch of the dockyard.

Nevertheless, it is believed that the Dutch Cabinet will decide in a decision expected later today not to issue export licenses for the order.

Meanwhile, the Dutch airplane manufacturer Fokker has received an order for seven F-100 passenger jets to the Chinese airline China Eastern. The order is said to be worth some \$160 million. The contract still needs the Chinese authorities' approval.

NORWAY

Romanian Resale of Heavy Water Seen

*92WP0148A Oslo AFTENPOSTEN in Norwegian
4 Feb 92 p 3*

[Article by Harald Stanghelle: "Ceausescu Sold Heavy Water"]

[Text] Twelve and one-half tonnes of heavy water that was sold to Romania in 1986 has been illegally sold further to India. Norwegian investigators have confirmed this during a visit in Bucharest. Norway's Embassy in New Delhi yesterday asked Indian authorities for additional information in the matter.

Yet again, an embarrassing Norwegian heavy water scandal has been confirmed. This time with the Ceausescu family, naive Norwegian authorities, and a nuclear-ambitious India in the main roles.

"According to the information we obtained in Bucharest, we consider it clear that 12.5 tonnes of heavy water that was sold to Romania went on to India," Chief Public Prosecutor Anstein Gjendal of the Economic Crime unit advises AFTENPOSTEN.

India is among the countries in the third world that have developed nuclear weapons and that refuse to allow their

nuclear facilities to be inspected by the International Atomic Energy Agency (IAEA). Therefore, it is forbidden to sell nuclear materials to India.

"In addition to asking Indian authorities for more detailed information, we have briefed the IAEA on what the Norwegian investigators have found in Bucharest," comments Foreign Ministry press spokesman Bjorn Blokhus.

India has earlier rejected Norwegian inquiries on this subject, among others, a request from April 1989 for an investigation of Norwegian heavy water that had gone astray. Blokhus does not want to speculate about what Norway will do if the Indians also reject the evidence that not lies on the table.

For Experimental Operation

It was in the fall of 1985 that Romania initiated negotiations to purchase Norwegian heavy water. Officially, the heavy water was supposed to be used for experimental operation of nuclear reactors that Canada had built in the country. Norwegian authorities did not investigate thoroughly enough: They would have then discovered that the reactors were far from being ready for such experimental operation and that the Canadians themselves were supposed to have sold heavy water to the Romanians—under adequate controls.

It was Norsk Hydro that negotiated the sale of the heavy water, while the Ministry of Trade approved the sale. The purchaser on the Romanian side was Kimika, registered in the tax paradise of Liechtenstein, with a branch office in Romania's capital of Bucharest. The Romanian Ministry of Trade guaranteed the use of the heavy water by issuing a so-called "end-user certificate," which means that the heavy water would and could not be resold.

When Norway sells heavy water to Romania at all, this is connected with the fact that Romania is a member of the IAEA and has signed the nuclear materials nonproliferation agreement. This means in theory that the country approves international control of its nuclear facilities.

India has never signed such an agreement and also does not permit any control of its civilian and military nuclear programs. This results in the country having problems in acquiring for example heavy water; they have to go out on the expensive and problematical "gray nuclear market."

Several Deliveries

Norway has been a "good and reliable supplier" of heavy water for the Indian nuclear program. Norwegian authorities first allowed themselves to be fooled by a West German businessman, the now dead Alfred Hempel, who bought 15 tonnes of Norwegian heavy water that he sold further to India in 1983. Then, three years later, Romania was the intermediary link.

On 19 March 1986, a Romanian transport plane with 12.5 tonnes of heavy water left Oslo on a course for Bucharest. It stayed there overnight before going on to the Indian city of Bombay on 20 March.

They did not even bother to reload the heavy water to give an appearance of legality.

In Bucharest

This year, just after New Year's, Chief Public Prosecutor Anstein Gjengedal was in Bucharest together with an experienced police investigator and learned there about the further fate of the heavy water. It appears that the 12.5 tonnes of heavy water went directly to a firm in Palton Road in Bombay. The same firm that purchased the 15 tonnes of heavy water that the German, Alfred Hempel, duped Norway out of.

And this firm is in fact part of the supply department of the Indian Atomic Energy Commission.

From Prof. Gary Milhollin, one of the leading U.S. experts in nuclear nonproliferation work, AFTEN-POSTEN has obtained a copy of the official annual report of the Indian Atomic Energy Commission. In the report's organizational chart, the supply department in Palton Road is represented as part of the nuclear organization.

Now there is also proof that it was there that the 12.5 tonnes of Norwegian heavy water ended up. In other words, the Norwegian heavy water is directly tied to an Indian nuclear program, which has the development of nuclear weapons as its main goal.

"The present leaders of Kimika were not aware of this special transaction and the Romanian authorities place the entire responsibility on the former Ceausescu regime," relates Gjengedal, who is careful to stress that they have received all possible help from today's Romanian authorities with regarding what actually took place.

But the whole matter has another, delicate element. Kimika's branch in Bucharest was used in the heavy water transaction by central members of the family of feared dictator Nicolai Ceausescu. The aim presumably was to obtain hard currency. For India was on a hunt for heavy water and was willing to pay what the "gray nuclear market" demanded.

"We have not found any trace of the money transaction itself," Gjengedal relates. Still another indication that the money went into pockets other than the slender Romanian state treasury.

If the Indians choose to give Norway any answer at all, they will probably maintain that they have never purchased heavy water from Norway and that Norwegian authorities therefore also have no right to look into commercial transactions between India and a third country.

Thus, it will be maintained that it is now much too late to "withdraw" Norway's contribution to the spread of nuclear materials, when efforts were not made earlier to control this thoroughly enough.

SPAIN

Defense Minister Sees Air, Missile Budget Cuts

*LD2002204992 Madrid RNE-1 Radio Network
in Spanish 2300 GMT 19 Feb 92*

[Text] On Wednesday, Defense Minister Julian Garcia Vargas appeared before the parliamentary Defense Committee. Minister Garcia Vargas reported that there would be spending cuts in his department at the expense of missiles and aircraft. Rosa Gonzalez reports:

[Gonzalez] The Defense Ministry has pulled out of two European missile system projects in which it had invested over 900 million pesetas because they are not of interest to the needs of the Armed Forces, according to the minister. During his appearance in Congress, Garcia Vargas put our country's investment in the program for the future European combat aircraft at 68,433 million pesetas of the total of 150 billion promised:

[Begin Garcia Vargas recording] The project is being reviewed. In the opinion of the Spanish Government, the review must be a serious one. The review should produce a substantial reduction in costs, even if it means a reduction in the number of aircraft, and even if it means a less sophisticated final product with less complex specifications than those initially planned. [end recording]

[Gonzalez] The number of aircraft will drop from 100 to 87 to bring down the cost of the project and, according to the minister, a further reduction for our country is not being ruled out. In the Congress lobby, Julian Garcia Vargas confirmed that on Friday [21 February] the Council of Ministers would be apprised of the contents of the new defense directive that is to be approved tomorrow at the meeting of the National Defense Council presided over by the king.

SWEDEN

Captain Admits Submarine Had Nuclear Arms

Describes Grounding

*92EN0237A Stockholm DAGENS NYHETER
in Swedish 23 Jan 92 p 5*

[Article by Anders Hellberg: "U-137 Had Nuclear Weapons"]

[Text] Soviet submarine U-137, which went aground off Karlskrona in October 1981, had nuclear weapons on board.

That was confirmed by the captain, Anatoliy Mikhailovich Gushchin, in an interview with TV Channel 3's Robert Aschberg on Wednesday evening.

Gushchin thereby puts an end to a 10-year-long Swedish debate in which the Defense Research Institute's measurements of the submarine have been challenged. The doubters have claimed that rusty old U-137 could not possibly have had sophisticated nuclear warheads on board.

When asked point-blank during the interview whether there were nuclear weapons on board, Gushchin answered with a quick "yes."

Powerful Weapons

When asked how powerful the weapons were, the captain answered:

"I can only say that they were powerful enough at the time to annihilate an enemy fleet if the conditions were right."

He also said that the nuclear weapons in question "were naturally powerful enough to annihilate entire harbors, but probably not cities."

This would indicate that in all probability, the warheads in the on-board torpedoes contained tactical charges of from five to 10 kilotonnes. The bomb that devastated the Japanese city of Hiroshima in 1945 was a 13-kilotonne bomb and caused at least 70,000 deaths.

Anatoliy Mikhailovich Gushchin was 35 years old and a captain 3d rank—the equivalent of a lieutenant commander in Sweden—when his submarine with the number 137 went aground on Torum Skerry in the southern part of Gase Bay at 1830 hours on 27 October 1981.

Along with Swedish Commander Karl Andersson, Gushchin was obviously the central figure in the 10-day-long drama that followed. The Swede was the first to reach the submarine, and it was he who handled the negotiations with the Russians and, later, their interrogation.

Gushchin was the submarine's commander, but it is likely that he was subordinate to 41-year-old Captain Josef Avsukyeich, who was said to be on board as a "navigation expert."

On the question of responsibility—that is, whether the submarine was on a spy mission or had simply made a navigation error—Gushchin supported what Avsukyeich and Political Officer Vasilii Besedin had claimed earlier: Most of the navigation aids on board were out of order and the crew made a navigation error.

Old Instruments

When asked why all the instruments had suddenly failed, Gushchin answered:

"The direction finder became unusable when we grazed the side of a fishing vessel, and the echo sounder became unusable because it was extremely old. The same can be said of the gyro compass, which was not particularly reliable."

The Swedish investigating committee, headed by Karl Andersson, was able to determine a few days after the grounding that the direction finder was working but that it was tuned to dance music, that the Decca navigation system, which uses radio beacons, was working, and that even the on-board gyro compass was working.

Radar Worked

Gushchin said nothing about that, noting only that "the Swedish authorities were able during their inspection of the submarine to ascertain that the equipment was not functioning."

According to the captain, the on-board radar was functioning, "but for security reasons, it was not being used."

Gushchin also described how the submarine had surfaced one and a half hours before going aground and had then proceeded using its diesel engines.

"Right up until the grounding," the crew believed that they were in the middle of the Baltic Sea.

The interviewer asked: "How long was it before you realized where you were?"

"The grounding itself made us realize that we were not where we were supposed to be," answered Gushchin. "Then there were doubts and various explanations and opinions before we realized that we must be somewhere in southern Sweden."

He also said that "we were ordered to blow up the boat if that became necessary."

Plans for Getting Free

Gushchin also confirmed that the strong Soviet naval force that gathered outside the limits of Swedish territorial waters following the grounding was preparing to free the submarine:

"Such a variant was not out of the question," as Gushchin put it.

According to Gushchin, the consequences for him when he arrived home in the Soviet Union were far-reaching:

"The consequences were such that I would not wish them even on my worst enemy."

Today Gushchin lives in Tallinn, the capital of Estonia, on a simple pension. "One must live on the little one has," as he expressed it in the interview with Robert Aschberg.

Other Incursions Doubted

92EN0237B Stockholm DAGENS NYHETER
in Swedish 23 Jan 92 p 5

[Article by Anders Hellberg: "Submarines a 'Figment of the Imagination'"]

[Text] The submarine incursions into Swedish waters over the past 10 years are "only figments of the imagination, like believing in flying saucers."

"There is not a shred of evidence," says Navy Captain Karl Andersson, the Swedish officer who headed the negotiations with the crew of submarine U-137, in an interview with DAGENS NYHETER.

Karl Andersson, who in many ways symbolizes the Swedish submarine hunts of the past 10 years, now says he no longer believes that there were any incursions into Swedish waters by minisubs.

"The whole thing was based on erroneous assumptions combined with prejudice against the Russians," says Andersson.

"It is true that there may have been isolated incursions by large submarines from Germany and the Soviet Union out in our territorial waters, but all the incursions in our internal waters—in the archipelagoes—are just figments of the imagination."

After the U-137 incident, when he was made the nation's hero and his picture appeared in mass media all over the world, Karl Andersson was promoted to captain and named commandant of the Karlskrona Naval School. He was intermittently commandant of the South Coast Naval Base in Karlskrona as well.

Karl Andersson now wants to completely forget the 10 years of unsuccessful sub hunting by the Swedes that followed the grounding of submarine U-137 in October 1981.

"We have chased plastic bags and swans and fired at everything that moved, but we have not come up with a shred of evidence. Not so much as a screw and not so much as a photograph despite very extensive efforts.

"The incursions at Drottningholm and in the Hammarby Harbor are completely absurd."

Not Even a Screw

"Over 1,200 submarines were sunk in World War II. Although we have been hunting submarines intensively for more than 10 years, we have not come up with so much as a screw in the way of evidence."

According to Andersson, there have been natural explanations for every submarine incident over the past 10 years.

He says that the two which attracted the most attention—Hors Bay in 1982 and Havringe in 1988—can be explained as follows:

"The only proof that existed in Hors Bay consisted of the tracks on the seabed, of which there are photographs. But those might very well be the tracks left by anchor chains lying on the seabed.

"Havringe was a matter of erroneous evaluation of the sonar echo. Why would the submarine lie still for so long and then suddenly just disappear?"

Navy spokesmen usually draw attention to the Doppler effects picked up by the hydrophones as being clear acoustical signs that something large was moving in the water. Could that have been something other than a submarine or a whale (whales are not usually found in the Baltic Sea)?

Almost a Traitor

"It could have been a large school of herring—I myself have seen that exact effect in hydrophones."

In some sectors of the Navy, Karl Andersson is viewed almost as a traitor because of his views. The argument used against him is that "he does not have access to the material on the incursions"—meaning classified military material.

"Wrong," says Andersson. "I think I know as much as any of those who believe there were submarines. When I was commandant of the Karlskrona Naval Base, I naturally had access to all operational material.

"On a few occasions I was even able to stop major submarine hunts in Blekinge because the assumptions were so obviously preposterous."

Now Andersson even wants to reevaluate the U-137 incident, about which he is probably one of the best-informed Swedes as a result of his questioning the Soviet officers on board.

Full Speed

"I believe it was an unintentional encroachment caused by serious navigation errors combined with a lack of know-how."

"Several witnesses said later that they had clearly heard the submarine's engines long before it went aground. What kind of spy submarine would move in close to land using diesel engines that could be heard for dozens of miles around?"

Andersson says he "had doubts about whether the Russians were to blame even when the submarine was released: But the Swedish report was already complete when I returned to the naval base after handing over the U-137. There was nothing I could say."

Belgian Cyclotron May Have Nuclear Uses

92P60129A Hasselt HET BELANG VAN LIMBURG
in Dutch 12 Feb 92 pp 1, 4

[Report by R.H.]

[Text] Iran has ordered a cyclotron from the Walloon company Ion Beam Applications (IBA). In the opinion of some, the Iranian regime can use this cyclotron, with adaptations and in combination with other apparatus, to enrich uranium for atom bombs.

IBA claims that the cyclotron is only suited for medical purposes. Yesterday, the Ministry of Foreign Affairs confirmed that IBA received an export permit for the cyclotron last year.

The Belgian cyclotron is intended for the Karaj medical complex, which is about 30 km from Tehran.

Last week the mojahedin announced at a press conference in Washington that Iran was secretly working at five locations producing nuclear weapons.

The resistance cites sources of information inside the regime. China, France, Pakistan, Argentina and Italy, in addition to Belgium, are said to be assisting the Iranian nuclear program, which is spread over five places in Iran.

In a conversation with this paper's editors on Monday evening [10 February], mojahedin spokesman Alizero Jafarzadeh said that Iran "is indeed building a medical center in Karaj but this center is large-scale camouflage. Tehran intends to establish in Karaj a secret installation for producing nuclear weapons. Of course the government does not want to do this openly. Nevertheless, several spokesmen of the government have repeatedly said that Tehran wants its own nuclear weapons."

Surprise

Last week during a press conference in Washington, the mojahedin announced that Iran is secretly working in five locations making nuclear weapons. Companies from China, France, Pakistan, Argentina, Italy and also Belgium are said to be involved in supplying parts and technology. In connection with the purchase of the Belgian cyclotron it is noteworthy that an official report to the Iranian leader Rafsanjani contains the phrase: "To our great surprise, we could obtain quite easily from the Belgians what we could not get elsewhere." The people at IBA said that this is obvious: "Our company is the only one in the world that produces this sort of cyclotron."

Spokesman Jafarzadeh insists that the Belgian cyclotron, in combination with other nuclear installations, can indeed be used in the Iranian nuclear weapons program.

IBA director Jongen maintains that the cyclotron can only be used for medical purposes. Other scientists say that it is theoretically possible to use components of the cyclotron for purposes other than medical—namely the

production of enriched uranium, which is necessary to make nuclear weapons. "However, that is a theoretical possibility" we were told.

IBA director Yves Jongen says that the company's cyclotron "has never been used for military purposes. The isotopes, which can be produced by this cyclotron, are only for medical use or for research in agricultural and industrial applications. Even if you tamper with the equipment, you cannot use it for military purposes." IBA also produces calutrons. Jongen: "We would never sell them to countries like Iran."

Positive Opinion

The spokesman in the Ministry of Foreign Affairs pointed out that the IBA export permit is entirely valid: "At the time, the Ministry of Foreign Affairs gave a positive opinion on granting a permit for IBA, because the change in the production method would require an enormous transformation cost, and because the equipment is not on the nuclear lists for which there are export restrictions." The Ministry of Foreign Affairs also stressed that there is no nuclear cooperation between Belgium and Iran.

According to Iranian resistance, the regime has purchased a calutron (an adapted version of the cyclotron) in China. This was confirmed yesterday by an independent source. This calutron is said to enable Iran to make small amounts of enriched uranium (the basis of the atomic bomb). To increase the production of enriched uranium, Tehran is said to be duplicating the Chinese calutrons on a large scale.

Laborious

The uranium for the first American atomic bomb (the Manhattan Project in Oak Ridge) was produced by a modified cyclotron (a so-called calutron or California University cyclotron). Today this method is regarded as too laborious and too expensive. This did not prevent the Iraqi regime of Saddam Husayn from enriching uranium by using this method, among others, until the end of last year. Saddam also tried to enrich uranium by chemical means and by the gas centrifuge method, the most commonly used method today.

The biggest disadvantage of the calutron method to enrich uranium is that it consumes enormous quantities of electricity. Thus it is no coincidence that the installations in Karaj are located a stone's throw away from the Karaj dam, where the hydroelectric power plant generates a large amount of electricity.

Inspection

On 6 February, at the invitation of the Iranian regime, a team from the International Atomic Energy Agency (IAEA) in Vienna went to Iran to inspect the existing nuclear facilities in the country. Up until now it had been assumed that Iran, which signed the Nonproliferation

Treaty in 1968, was not in a position to enrich enough uranium to produce an atomic bomb.

Iran only granted access to three nuclear reactors, which are used for applied research. It is not clear whether the IAEA team will gain access to other nuclear sites.

The mission of the IAEA team is regarded as a test of the credibility of the agency, especially since the IAEA was not able to inform the world opinion in time about the nuclear plans of Saddam Husayn of Iraq.

Five Sites of Iranian Nuclear Projects

According to the Iranian resistance in Washington, Iran is in the process of producing nuclear weapons in the greatest secrecy at five locations. These five places are indicated on the adjacent map [not reproduced].

- Isfahan is located in Central Iran and is thus safer from a foreign military attack than places located nearer to the border. The complex is built in the form

of a city district and some buildings are camouflaged. Some of the installations are underground. Isfahan already has a small nuclear reactor and the regime is said to be seeking parts for a bigger reactor.

- Karaj is presented to the outside world as a medical center. All buildings are designed so that they can withstand a military attack. The Belgian cyclotron is destined for Karaj. The Chinese calutron is said to have already been installed in Karaj.
- Gorgan is near the Caspian Sea. Iran is said to have purchased from Turkmenistan (a former Soviet republic) two 450-megawatt reactors to install in Gorgan.
- Darkhovin is located 50 km to the northeast of Abadan. The regime calls this project the "Karoun Plan" and it is regularly visited by Chinese experts.
- Moa'alem Kelayeh is located 120 km northwest of Tehran. To keep this project secret, the authorities tried to prevent any foreign company from participating.

NATO's Woerner Remarks on Nuclear Experts

*LD2102174592 Berlin ADN in German 1543 GMT
21 Feb 92*

[Text] Hamburg (ADN)—The growing tendency for nuclear experts in the former Soviet Union to emigrate to countries in the Third World calls for the fastest possible action, said Manfred Woerner, NATO secretary general, during a guest lecture to the Bundeswehr's leadership academy in Hamburg on Friday [21 February]. Presently, the recruitment of these specialists is small in numbers. "We are not yet too late," Woerner said. He said that, over and above the financial security of the experts, there should be action to secure a better monitoring system and the employment of engineers in civilian and military projects like establishing an early-warning system for antimissile systems or in nuclear disarmament.

Woerner described the establishment of stability in Central and Eastern Europe and the prevention of a confrontation of rival states on the territory of the former Soviet Union as one of the main tasks facing NATO in the future. Now that the dangers of a world war III and a massive threat from the East no longer exists, there is now in this "unstable region" the danger of longer-term regional conflicts, Woerner said. But he ruled out the danger of a military putsch in the former Soviet Union in spite of the "potential for discontent" there.

NATO's task is the expansion of cooperation and consultation with the Eastern European neighbors, for example through the admission of the states of the Commonwealth of Independent States to the North Atlantic Cooperation Council scheduled for March. "The aim is an expansion of a Euro-Atlantic security zone with the pillars comprising NATO, the Western

European union, and the CSCE," Woerner said. Admitting additional states must not take effect in an overhasty manner; but this (admission) is "not ruled out and, in fact, is probable."

Within the framework of the new NATO strategy of flexible "crisis management" through multinational intervention forces, in Woerner's view, the Bundeswehr must be ready to assume the same military obligations as all other NATO countries. The virtual doubling of the number of German conscientious objectors last year surprised him, too, Woerner said. "Germany can fulfill alliance commitments and remain secure only with the Bundeswehr. Withdrawing conscription will "drive the Bundeswehr into a social ghetto," he remarked.

FRG's Genscher To Speak on Chemical Weapons

*LD1302115992 Berlin ADN in German 1111 GMT
13 Feb 92*

[Text] Bonn (ADN)—FRG Foreign Minister Hans-Dietrich Genscher is to deliver a speech next Thursday [20 February] to the Geneva Disarmament Conference on Chemical Weapons, announced the Foreign Office in Bonn on Thursday [13 February].

The conference negotiations are aimed at working out a convention on a worldwide, comprehensive, verifiable ban on chemical weapons. In 1992, Germany has the chairmanship of the disarmament conference negotiating committee.

Only a few days ago Genscher praised the fact that the conference has set itself the goal of achieving the conclusion of a convention on the banning of chemical weapons before the end of this year. The danger of these insidious weapons' proliferation, Genscher said, is dramatically acute today. Only a worldwide convention can bring a lasting and reliable solution.

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